



FROEHLING & ROBERTSON, INC.

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310 Hubert Street
Raleigh, North Carolina 27603-2302
T 919.828.3441 | F 919.828.5751
NC License #F-0266

November 3, 2017 (revised February 5, 2018)

North Carolina Department of Transportation
Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, North Carolina 27610

Attn.: Mr. Gordon Box, L.G.
GeoEnvironmental Project Manager

Re: State Project: R-2530B
WBS Element: 34446.1.6
NC 24-27 from Bird Road in Albemarle to West of the Pee Dee River

Subject: Preliminary Site Assessment
Parcel #018 – South Central Oil Company, Inc. (Vacant Lot / Retail Store Front)
1954 East Main Street
Albemarle, North Carolina
F&R Project #66V-0092

Dear Mr. Box:

Froehling and Robertson, Inc. (F&R) has completed the authorized Preliminary Site Assessment at the South Central Oil Company, Inc. property located in Albemarle, North Carolina. The work was performed in general accordance with F&R's Proposal No. 1866-00132, dated June 14, 2017 (and revised June 22, 2017). Notice to Proceed was issued to F&R on July 6, 2017. This report documents our field activities, presents the results of laboratory analysis and provides estimated quantities of petroleum impacted soils.

Please do not hesitate to contact us if you should have any questions regarding this report.

Sincerely,

FROEHLING & ROBERTSON, INC.

DocuSigned by:

4DB7F275EBFD410...

Clint E. Sorrell
Environmental Scientist

DocuSigned by

E425D6E8C23545E
NORTH CAROLINA PROFESSIONAL SEAL 038743
BENJAMIN A. WHITLEY

Benjamin A. Whitley, P.E.
GeoEnvironmental Services Manager

Corporate HQ: 3015 Dumbarton Road Richmond, Virginia 23228 T 804.264.2701 F 804.264.1202 www.fandr.com

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FROEHLING & ROBERTSON, INC.



PRELIMINARY SITE ASSESSMENT

South Central Oil Company, Inc. (Parcel #018)
Vacant Lot /Retail Store Front
1954 East Main Street
Albemarle, North Carolina
State Project: R-2530B
WBS Element: 34446.1.6
F&R Project #66V-0092

November 3, 2017 (revised February 5, 2018)

Prepared for:

**North Carolina Department of Transportation
Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, NC 27610**



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Preliminary Site Assessment Report
South Central Oil Company, Inc. Property (Parcel #018)
Albemarle, Stanly County, North Carolina
F&R Project No. 66V-0092

1.0 Introduction

Froehling and Robertson, Inc. (F&R) has prepared this Preliminary Site Assessment (PSA) Report to document soil assessment activities performed at the South Central Oil Company, Inc. Property addressed as 1954 East Main Street, in Albemarle, Stanly County, North Carolina. The site is located approximately 470 feet west of the East Main Street and Barnard Street intersection as shown in Appendix I, Figures 1 and 2. As indicated in the Request for Technical and Cost Proposal (RFTCP), the site operates as a vacant lot and retail store front. According to the NCDEQ underground storage tank (UST) Section Registry, no USTs are registered for the site. However, the site may have operated as a gas station or repair shop. Historical aerial photography indicates that the site was also a junk yard at one time.

According to the NCDOT within their RFTCP, acquisition of right-of-way is necessary for the proposed NC 24-27 design. (See Figure No. 3). As such, the NCDOT requested a PSA be performed to assess the possibility of encountering petroleum impacted soil from known or unknown USTs, and to locate USTs which may exist within proposed easements and right of-way at the project site.

The PSA was performed in general accordance with F&R's Proposal No. 1866-00132, dated June 14, 2017 (and revised June 22, 2017) with Notice to Proceed issued to F&R by the NCDOT on July 6, 2017. The purpose of this report is to document field activities, present the results of laboratory analysis, and provide estimated quantities of petroleum impacted soils.

The existing on-site structure is one-story in height and is presumably constructed of brick and concrete masonry unit (CMU). The remainder of the site consists of an asphalt paved parking lot and cleared/wooded land. The site is bordered to the north by East Main Street; to the south by wooded land; to the east by wooded land; and to the west by an ABC Store. Access to the site is gained from East Main Street to the north.

2.0 Geophysical Survey

Prior to F&R's soil assessment activities, Pyramid Environmental & Engineering, P.C. (Pyramid) conducted a geophysical survey to locate suspect metal underground storage tanks (USTs). The



geophysical work was conducted on August 19, 2017, and was performed within the proposed right-of-way and proposed drainage and utility easement of East Main Street.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61 instrument. The EM61 data was collected along parallel survey lines spaced approximately 5 feet apart. Ground-penetrating radar (GPR) investigations were not performed at the project site. The data was reviewed in the field to evaluate the possible presence of USTs and later transferred to a desktop computer for further review. Data was collected over most of the planned survey site with the exception of areas immediately adjacent to metallic objects and other obstacles. Isolated EM anomalies were identified on the site, including a storm drain, reinforced concrete pipe, a sign, manholes, utilities, vehicles, and corrugated metal pipe.

Based on the EM and GPR geophysical data collected at the site, Pyramid did not observe anomalies that were interpreted to be the results of probable metallic USTs within about 8 feet of the ground surface. The complete geophysical report is attached as Appendix II.

3.0 Site Assessment Activities

F&R visited the site on August 8 and 9, 2017 to perform the Preliminary Site Assessment. The assessment consisted of advancing 8 borings into the soils at the project site using direct-push technology (GeoProbe). The boring locations were determined by F&R staff based on the results of the geophysical survey, site features and proposed construction activities. Four of the borings (B-1 through B-4) were advanced on the northwestern portion of the site adjacent to East Main Street. Borings B-5 through B-8 were advanced on the northeastern portion of the site, also adjacent to East Main Street. F&R attempted to advance the borings to the proposed depth of 10 feet below-ground-surface (bgs). However, Borings B-1 through B-4, B-6, and B-7 were terminated at depths ranging from 8 to 9 feet bgs, and Borings B-5 and B-8 were terminated at depths ranging from 6 to 7 feet bgs where GeoProbe refusal was encountered. Photos detailing existing site features are attached as Appendix III and boring locations are depicted in Figure 3 of this report.

Soil sample cores from the borings were collected in disposable, 4-foot long acetate sleeves. The soil samples were visually/manually classified and screened in the field using a calibrated photo-ionization detector (PID) for evidence of petroleum hydrocarbons. Evaluation of VOC concentrations were performed using a MiniRae 3000 PID which produces results in parts per million (ppm). A representative soil sample was collected from two foot sections of each sleeve and placed in a re-sealable plastic bag. The vapors were then allowed to equilibrate in the



headspace of the bag for approximately ten minutes prior to measurement with the PID. The measurements were collected by placing the probe tip into the headspace of the bag. PID measurements can be found in the GeoProbe Logs in Appendix IV, as well as in Table 1 in Section 5.0 below.

Generally, the soil sample in each boring which exhibited the highest PID concentration was submitted for laboratory analysis for diesel range organics (DRO), gasoline range organics (GRO), Total BTEX (benzene, toluene, ethylbenzene and xylenes), 16 PAHs (polycyclic aromatic hydrocarbons) and BaP (Benzo(a)pyrene) by Ultraviolet Fluorescence (UVF) technology (RedLab QED Hydrocarbon Analyzer). The samples were collected in laboratory-supplied sample containers, placed in a cooler with ice, and shipped via UPS to RedLab in Wilmington, North Carolina following standard chain-of custody procedures.

Due to concerns associated with the historical use of the site as an auto salvage facility, F&R collected soil samples for laboratory analysis of RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) and Volatile Organic Compounds (VOCs). These soil samples were collected from the 0 to 2 feet bgs sample from each boring. The samples were collected in laboratory-supplied sample containers, placed in a cooler with ice, and transferred to ENCO Laboratories in Cary, North Carolina following standard chain-of custody procedures.

4.0 Subsurface Conditions

As indicated in the attached GeoProbe Logs (Appendix IV), subsurface conditions from existing ground surface to boring termination primarily included various layers of dry to moist orange-brown-gray-tan silty sandy clay; dry tan silty fine to medium sand; and dry gray silty clay with siltstone. F&R attempted to advance the borings to the proposed depth of 10 feet below-ground-surface (bgs). However, Borings B-1 through B-4, B-6, and B-7 were terminated at depths ranging from 8 to 9 feet bgs, and Borings B-5 and B-8 were terminated at depths ranging from 6 to 7 feet bgs where GeoProbe refusal was encountered due to interbedded layers of dry, dense silty clay.

PID readings generally did not exceed 1.2 ppm, and petroleum odors and/or groundwater were not observed during field screening or sample collection activities.

5.0 Analytical Results

As shown in the following table, petroleum hydrocarbons identified as GRO were not detected in the soil samples obtained from the site. Petroleum hydrocarbons identified as DRO were detected in the soil samples at four boring locations advanced at the site (B-2, B-3, B-7, and B-8),



at depths from 0 to 2 feet bgs (B-8) to 6 to 8 feet bgs (B-3 and B-7). The laboratory results indicate that the DRO concentrations ranged from 0.63 mg/kg (B-7) to 23.8 mg/kg (B-8), which are below the NCDEQ Action Level of 100 mg/kg.

The laboratory analytical results indicate concentrations of the sum of 16 EPA PAHs above the method detection limit, but below the total NCDEQ Action Level of 9,068.816 mg/kg at Borings B-2 and B-8. The soil analytical results are summarized in Table 1 below. The laboratory analytical results can also be found in the attached Appendix V of this report.

Table 1
Soil Sampling Analytical Results (UVF)

Sample ID	Sample Date	Sample Depth (ft bgs)	PID Reading (ppm)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)	Total BTEX (mg/kg)	Total Aromatics (mg/kg)	16 EPA PAHs (mg/kg)	BaP (mg/kg)
B-1	8/8/17	4-6	0.6	<0.37	<0.37	<0.37	<0.37	<0.07	<0.12	<0.015
B-2		4-6	0.8	<0.44	14.8	14.8	<0.44	8.2	0.41	<0.018
B-3		6-8	0.9	<0.49	2.4	2.4	<0.49	0.79	<0.16	<0.02
B-4		6-8	1.1	<0.88	<0.88	<0.88	<0.88	<0.18	<0.28	<0.035
B-5		6-7	0.9	<0.92	<0.92	<0.92	<0.92	<0.18	<0.29	<0.037
B-6		6-8	0.6	<0.48	<0.48	<0.48	<0.48	<0.1	<0.15	<0.019
B-7		6-8	0.8	<0.5	0.63	0.63	<0.5	0.36	<0.16	<0.02
B-8	8/9/17	0-2	0.4	<0.58	23.8	23.8	<0.58	12.7	0.63	<0.023
NCDEQ Action Level			50	100	NSE	13.8056	NSE	9,068.816	0.088	

Concentrations shown in bold exceed the NCDEQ Action Level as outlined in the NCDEQ, DWM, UST Section Guidelines

ppm = parts per million

TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics

BTEX = Benzene, Toluene, Ethylbenzene and Xylenes

DRO = Diesel Range Organics

NSE = No Standard Exists

As shown in Table 2, laboratory analysis detected several RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, and mercury) at concentrations above laboratory method detection limit. The laboratory results indicate that the arsenic concentrations ranged from 6.25 mg/kg (B-8) to 15.7 mg/kg (B-7), which are above the NCDEQ Inactive Hazardous Sites Branch (IHSB) Residential Preliminary Soil Remediation Goal (PSRG) level of 0.68 mg/kg. The remaining metals were below their respective NCDEQ Inactive Hazardous Sites Branch (IHSB) Residential PSRG. The analytical results for RCRA-8 metals are summarized in Table 2 below.



Table 2
Soil Sampling Analytical Results (RCRA-8 Metals)

Sample ID	Sample Date	Sample Depth (ft bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)
B-1	8/8/17	0-2	7.89	64.2	0.506	16.8	254	0.0298
B-2	8/8/17	0-2	7.25	41.6	0.178	17.2	64.5	0.0214
B-3	8/8/17	0-2	9.25	37.1	0.0179 J	17.2	23.5	0.0269 J
B-4	8/8/17	0-2	9.51	46.3	0.117	15.8	37.4	0.0357
B-5	8/8/17	0-2	13.5	35.2	ND	19.8	36.5	0.0279 J
B-6	8/8/17	0-2	10.9	25.0	ND	11.6	14.1	0.0291
B-7	8/8/17	0-2	15.7	34	ND	16.5	18.4	0.0310
B-8	8/9/17	0-2	6.25	44.8	0.327	22.1	61.2	0.0305
NCDEQ IHSB Residential PSRG			0.68	3,100	14.0	23,000	400*	2.3
NCDEQ IHSB Industrial PSRG			3.0	47,000	200	100,000	800*	3.1

Concentrations shown in bold exceed the NCDEQ IHSB Residential PSRG

*Residential and Industrial PSRGs are not available for Lead. Therefore, Lead concentrations are compared to Residential and Industrial EPA Regional Screening Levels (RSLs)

J = The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.

In addition, 2-Butanone and Bromomethane were detected in Boring B-7 from 0 to 2 feet bgs, and Carbon disulfide was detected in Boring B-2 at a concentration of 0.00046 from 0 to 2 feet bgs. The soil analytical results for VOCs are summarized in Table 3 below.

Table 3
Soil Sampling Analytical Results (VOCs)

Sample ID	Sample Date	Sample Depth (ft bgs)	2-Butanone (mg/kg)	Bromo-methane (mg/kg)	Carbon disulfide (mg/kg)
B-2	8/8/17	0-2	ND	ND	0.00046 J
B-7	8/8/17	0-2	0.0014 J	0.00048 J	ND
NCDEQ IHSB Residential PSRG			5,500	1.4	160
NCDEQ IHSB Industrial PSRG			28,000	6.4	740

J = The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.



6.0 Conclusions and Recommendations

F&R conducted a PSA at the South Central Oil Company, Inc. Property addressed as 1954 East Main Street, in Albemarle, Stanly County, North Carolina. A geophysical investigation was performed by Pyramid Environmental & Engineering to investigate the presence and location of USTs in the proposed right-of-way. Based on the results of the geophysical survey, it was determined that USTs were not present within the within the surveyed area.

Eight GeoProbe borings were advanced during the assessment within the proposed right-of-way, where grading activities and storm drain utilities are proposed in association with the NC 24-27 improvements. Based on the results of laboratory testing and observed PID readings, petroleum impacted soils were detected in the vicinity of Borings B-2, B-3, B-7, and B-8. Laboratory analysis detected concentrations of DRO at these locations; however, the concentrations of these compounds were below the NCDEQ Action Level of 100 mg/kg.

Several metals were detected above laboratory MDL in the soil samples submitted for laboratory analysis of RCRA-8 Metals, including arsenic, barium, cadmium, chromium, lead, and mercury. Arsenic was detected at a concentration ranging from 6.25 to 15.7 mg/kg, and was the only metal analyzed during this investigation that exceeded its IHSB Residential PSRG (0.68 mg/kg). According to the USGS Publication *Geochemical and Mineralogical Data for Soils of the Conterminous United States: U.S. Geological Survey Data Series 801* (Smith, D.B., Cannon, W.F., Woodruff, L.G., Solano, Federico, Kilburn, J.E., and Fey, D.L., 2013), arsenic may be naturally occurring in the Stanly County region, at a concentration ranging from 1.2 to 14.2 mg/kg. Therefore, the detection of Arsenic is not considered a concern with respect to the project site or proposed construction activities.

2-Butanone and Bromomethane were detected in Boring B-7 from 0 to 2 feet bgs. However, the concentrations were below the NCDEQ IHSB Residential PSRG levels of 5,500 and 1.4 mg/kg, respectively. In addition, carbon disulfide was detected in Boring B-2 at a concentration of 0.00046 from 0 to 2 feet bgs, which is below the NCDEQ IHSB Residential PSRG level of 154 mg/kg.

It should be noted that a delineation of the soil contamination was not performed, as this was not included in the proposed scope of work. The above estimates are based on interpretations of soil analytical results, PID readings and our experience with petroleum UST releases.

7.0 Limitations

These services have been performed, under authorization of the North Carolina Department of



Transportation for specific application on this project. These services have been performed in accordance with generally accepted environmental and hydrogeological practices. No other warranty, expressed or implied is made. As with any subsurface investigation, actual conditions exist only at the precise locations from which samples were taken. Certain inferences are based on the results of sampling and related testing to form a professional opinion of conditions in areas beyond those from which samples were taken. Our conclusions and recommendations are based upon information provided to us by others, our sampling and testing results and our site observations. We have not verified the completeness or accuracy of the information provided by others, unless otherwise noted. Our observations are based upon conditions readily visible at the site at the time of our site visits.

Froehling & Robertson, Inc. by virtue of providing the services described in this report, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state or federal public agencies any conditions at the site that may present a potential danger to public health, safety or the environment. In areas that require notification of local, state, or federal public agencies as required by law, it is the Client's responsibility to so notify.

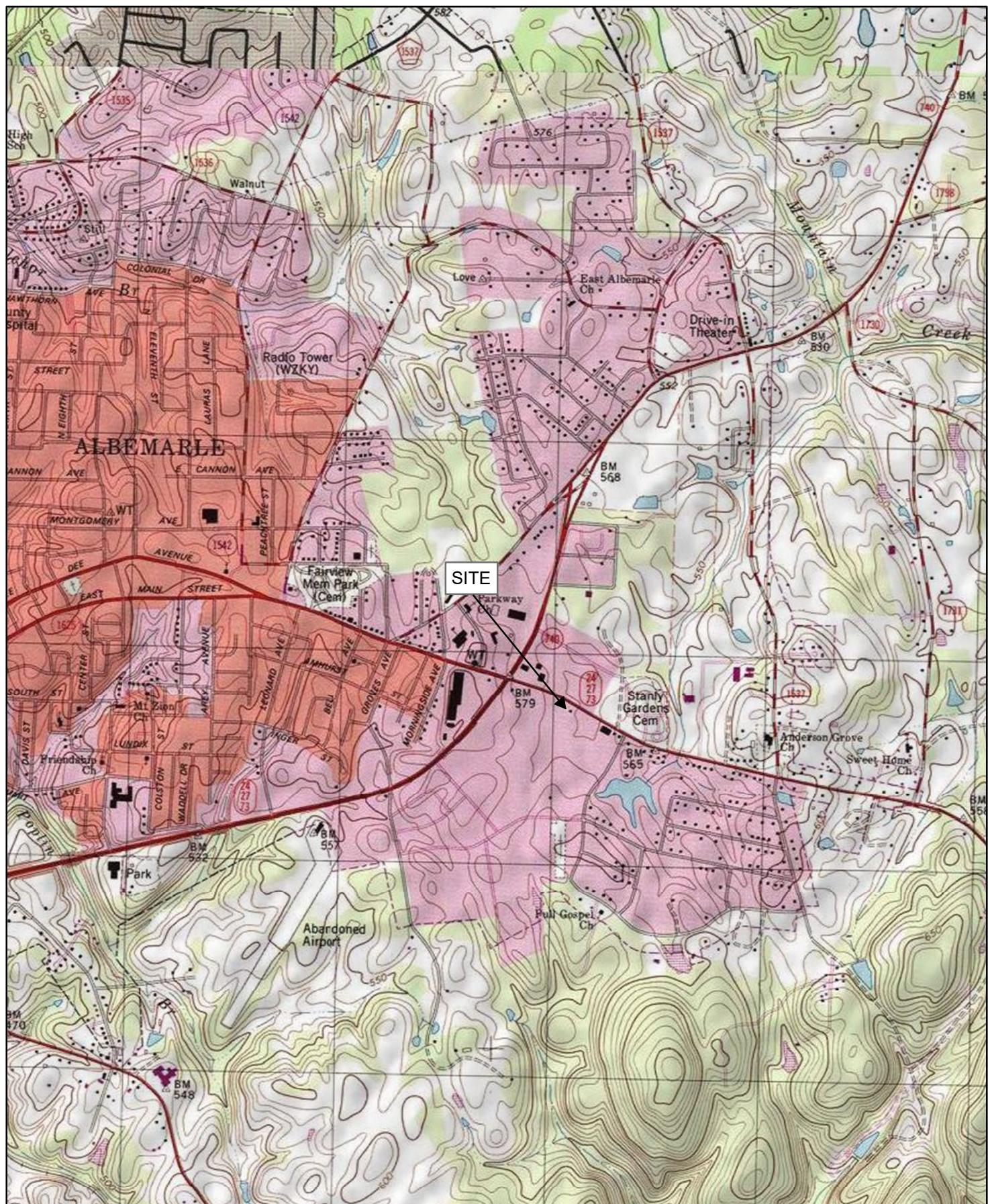


APPENDIX I

Figure No. 1 – TOPOGRAPHIC MAP

Figure No. 2 – SITE VICINITY MAP

Figure No. 3 – LABORATORY RESULTS & BORING LOCATION PLAN



SITE TOPOGRAPHIC MAP

Disclaimer: E&R makes no warranties or guarantees regarding the information contained in this presentation.

1954 East Main Street - Albemarle, North Carolina



FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
310 Hubert Street
Raleigh, North Carolina 27603-2302 USA
T 919.828.3441 F 919.828.5751

Client:	NCDOT	Disclaimer: F&R makes no warranties or guarantees completeness of geographic features shown on this measurement provided by source agencies can be inaccurate.
Project:	R-2530B PSAs	
Location:	Parcel #018, Albemarle, NC	
F&R Project No.:	66V-0092	1954 East Main Street - Albemarle, North Carolina
Data:	USGS 2013	
Date:	October 2017 (Revised Feb. 5, 2018)	Scale: 1:24,000 1 inch = 2,000 feet

accuracy or
accuracy of
detecting F&R.

FIGURE
No.: 1



SITE VICINITY MAP

0 100 200 400 600 Feet



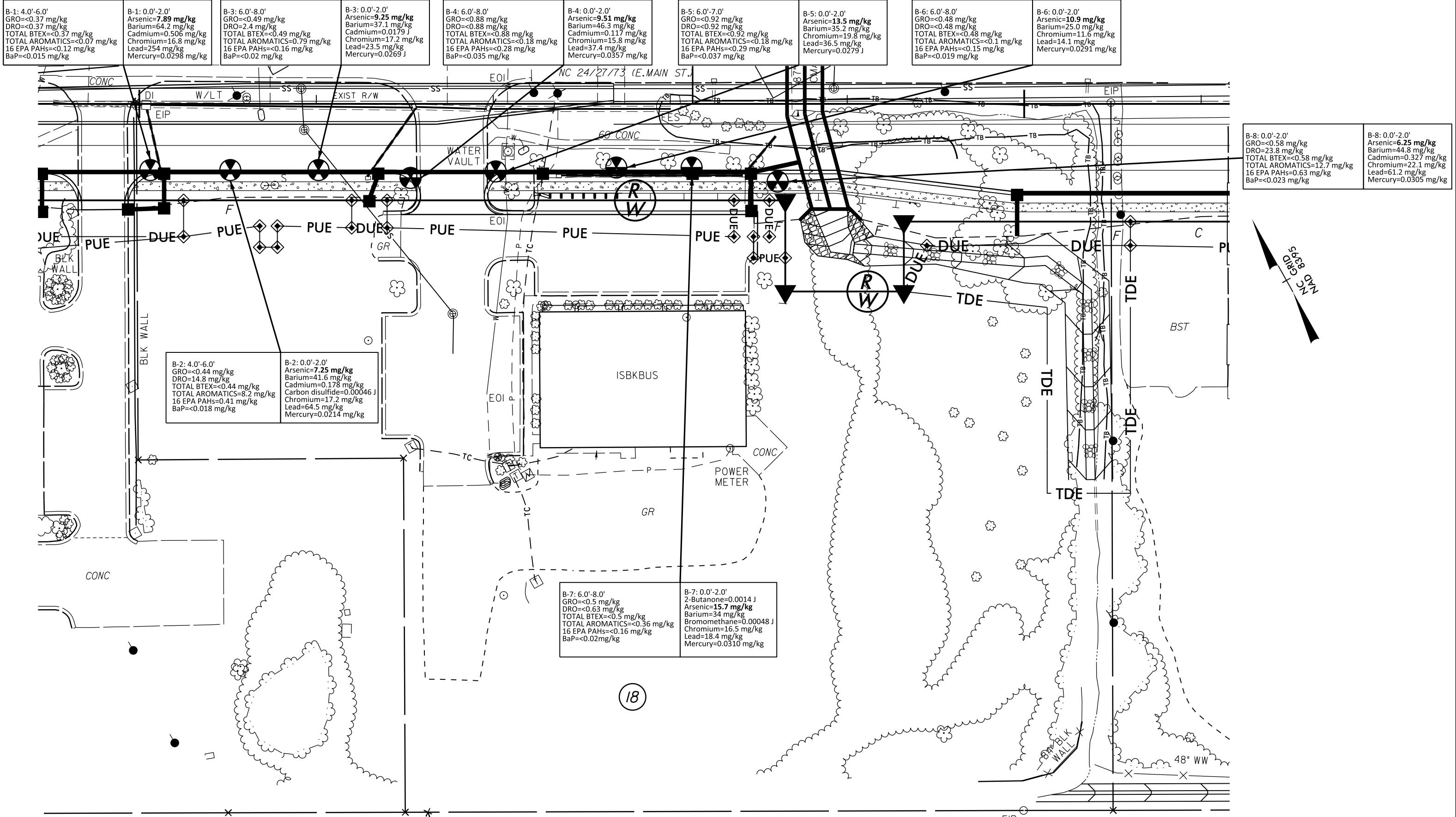
FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
310 Hubert Street
Raleigh, North Carolina 27603-2302 USA
T 919.828.3441 | F 919.828.5751

Client: NCDOT
Project: R-2530B PSAs
Location: Parcel #018, Albemarle, NC
F&R Project No.: 66V-0092
Data: ArcMap Imagery
Date: October 2017 (Revised Feb. 5, 2018)

Disclaimer: F&R makes no warranties or guarantees regarding the accuracy or completeness of geographic features shown on this map. Spatial accuracy of measurement provided by source agencies can be obtained by contacting F&R.
1954 East Main Street - Albemarle, North Carolina
Scale: 1:2,400 1 inch = 200 feet



FIGURE
No.: 2



SINCE 1881
FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
310 Hubert Street
Raleigh, North Carolina 27603-2302 | USA
T 919.828.3441 | F 919.828.5751
www.fandr.com

SCALE (FEET)
0 25' 50'
1'=50'

LEGEND

Approximate Geoprobe Boring Location
Sample data shown in bold exceed the NCDEQ Action Level as outlined in the NCDEQ DWM UST Section Guidance

CLIENT: NC DOT
PROJECT: R-2530B PSAs
LOCATION: Albemarle, NC Parcel #018, 1954 East Main Street
F&R PROJECT No.: 66V-0092
DRAWN BY: T. T. Walker
CHECKED BY: B. Whitley, P.E.
DATE: February 2018
SCALE: 1"=50'

FIGURE 3
No.:



APPENDIX II

GEOPHYSICAL REPORT PREPARED BY PYRAMID



P Y R A M I D G E O P H Y S I C A L S E R V I C E S
(P R O J E C T 2 0 1 7 - 2 0 3)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION: PARCEL 018 NCDOT PROJECT R-2530B

1954 E. MAIN STREET, ALBEMARLE, NC
AUGUST 25, 2017

Report prepared for: Benjamin Whitley, P.E.
Froehling and Robertson
310 Hubert Street
Raleigh, North Carolina 27603

Prepared by: 
Eric C. Cross, P.G.
NC License #2181

Reviewed by: 
Douglas A. Canavello, P.G.
NC License #1066

GEOPHYSICAL INVESTIGATION REPORT
Parcel 018 – 1954 E. Main Street
Albemarle, Stanly County, North Carolina

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Figure 2 – Parcel 018 EM61 Results Contour Map
Figure 3 – Overlay of Geophysical Survey Boundaries on NCDOT Engineering Plans

LIST OF ACRONYMS

CADD	Computer Assisted Drafting and Design
DF	Dual Frequency
EM.....	Electromagnetic
GPR.....	Ground Penetrating Radar
GPS	Global Positioning System
NCDOT.....	North Carolina Department of Transportation
ROW	Right-of-Way
UST	Underground Storage Tank

EXECUTIVE SUMMARY

Project Description: Pyramid Environmental conducted a geophysical investigation for Froehling & Robertson, Inc. (F&R) at Parcel 018, located at 1954 E. Main Street, Albemarle, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project R-2530B). F&R directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement to the proposed ROW lines and/or easement lines within the property, whichever distance was greater. Conducted on July 19, 2017, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: All of the EM anomalies were directly attributed to visible cultural features at the ground surface. For this reason, a GPR survey was not required. Collectively, the geophysical data did not show any evidence of unknown metallic USTs at Parcel 018.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Froehling and Robertson, Inc. (F&R) at Parcel 018, located at 1954 E. Main Street, Albemarle, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project R-2530B). F&R directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement to the proposed ROW lines and/or easement lines within the property, whichever distance was greater. Conducted on July 19, 2017, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a commercial building surrounded by an asphalt parking area and grass medians. A portion of the parcel on the southeast side was inaccessible due to heavy vegetation. An aerial photograph showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

FIELD METHODOLOGY

The geophysical investigation consisted of an electromagnetic (EM) induction-metal detection survey. Pyramid collected the EM data using a Geonics EM61 metal detector integrated with a Trimble AG-114 GPS antenna. The integrated GPS system allows the location of the instrument to be recorded in real-time during data collection, resulting in an EM data set that is geo-referenced and can be overlain on aerial photographs and CADD drawings. A boundary grid was established around the perimeter of the site with marks every 10 feet to maintain orientation of the instrument throughout the survey and assure complete coverage of the area.

According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. The EM61 data were digitally collected at

approximately 0.8-foot intervals along north-south trending or east-west trending, generally parallel survey lines, spaced five feet apart. The data were downloaded to a computer and reviewed in the field and office using the Geonics NAV61 and Surfer for Windows Version 14.0 software programs.

GPR data were not collected due to all EM anomalies being directly attributed to visible cultural features at the ground surface (see *Discussion of Results* section below).

Pyramid's classifications of USTs for the purposes of this report are based directly on the geophysical UST ratings provided by the NCDOT. These ratings are as follows:

Geophysical Surveys for Underground Storage Tanks on NCDOT Projects

High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	Probable UST Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	Possible UST Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist's discretion.

DISCUSSION OF RESULTS

Discussion of EM Results

A contour plot of the EM61 results obtained across the survey area at the property is presented in **Figure 2**. Each EM anomaly is numbered for reference in the figure. The following table presents the list of EM anomalies and the cause of the metallic response, if known:

LIST OF METALLIC ANOMALIES IDENTIFIED BY EM SURVEY

Metallic Anomaly #	Cause of Anomaly	Investigated with GPR
1	Storm drain	
2	Reinforced concrete pipe	
3	Sign	
4	Manholes	
5	Storm drains	
6	Utilities	
7	Vehicles/storm drain	
8	Reinforced concrete pipe	
9	Vehicles	
10	Vehicles/storm drain	
11	Corrugated metal pipe	

All of the EM anomalies were directly attributed to visible cultural features including utilities, storm drains, pipes, signs, vehicles, and manholes. For this reason, a GPR survey was not required.

Collectively, the geophysical data did not show any evidence of unknown metallic USTs at Parcel 018.

Figure 3 provides an overlay of the geophysical survey area onto the NCDOT MicroStation engineering plans (proposed ROW and easements) for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 data collected at Parcel 018 in Albemarle, North Carolina, provides the following summary and conclusions:

- The EM61 survey provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.
- All of the EM anomalies were directly attributed to visible cultural features at the ground surface. For this reason, a GPR survey was not required

- Collectively, the geophysical data did not show any evidence of unknown metallic USTs at Parcel 018.

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for F&R in accordance with generally accepted guidelines for EM61 surveys. It is generally recognized that the results of the EM61 surveys are non-unique and may not represent actual subsurface conditions. The EM61 results obtained for this project have not conclusively determined the definitive presence or absence of metallic USTs, but the evidence collected is sufficient to result in the conclusions made in this report. Additionally, it should be understood that areas containing extensive vegetation, reinforced concrete, or other restrictions to the accessibility of the geophysical instruments could not be fully investigated.

N↑

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA

NC STATE PLANE, NORTHING (NAD83, FEET)



View of Survey Area
(Facing Approximately Southeast)



View of Inaccessible Portion of Survey Area
(Facing Approximately Southeast)

TITLE	PARCEL 018 - GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS	
PROJECT	PARCEL 018	ALBEMARLE, NORTH CAROLINA NCDOT PROJECT R-2530B
 PYRAMID GEOPHYSICS		503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology
DATE	8/24/2017	CLIENT FROEHLING & ROBERTSON
PYRAMID PROJECT #:	2017-203	FIGURE 1

N ↑

EM61 METAL DETECTION RESULTS

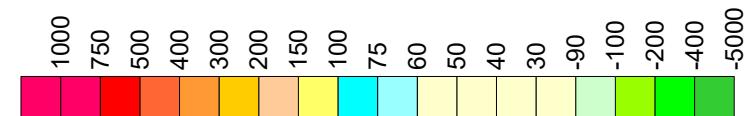
NO EVIDENCE OF UNKNOWN METALLIC USTs OBSERVED.

NC STATE PLANE, NORTHING (NAD83, FEET)



The contour plot shows the differential results of the EM61 instrument in millivolts (mV). The differential results focus on larger metallic objects such as USTs and drums. The EM61 data were collected on July 19, 2017, using a Geonics EM61 instrument. Verification GPR data were not required due to all EM anomalies being directly attributed to cultural features.

EM61 Metal Detection Response
(millivolts)



TITLE

PARCEL 018 -
EM61 RESULTS CONTOUR MAP

PROJECT

PARCEL 018
ALBEMARLE, NORTH CAROLINA
NCDOT PROJECT R-2530B



503 INDUSTRIAL AVENUE
GREENSBORO, NC 27460
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

DATE

8/24/2017

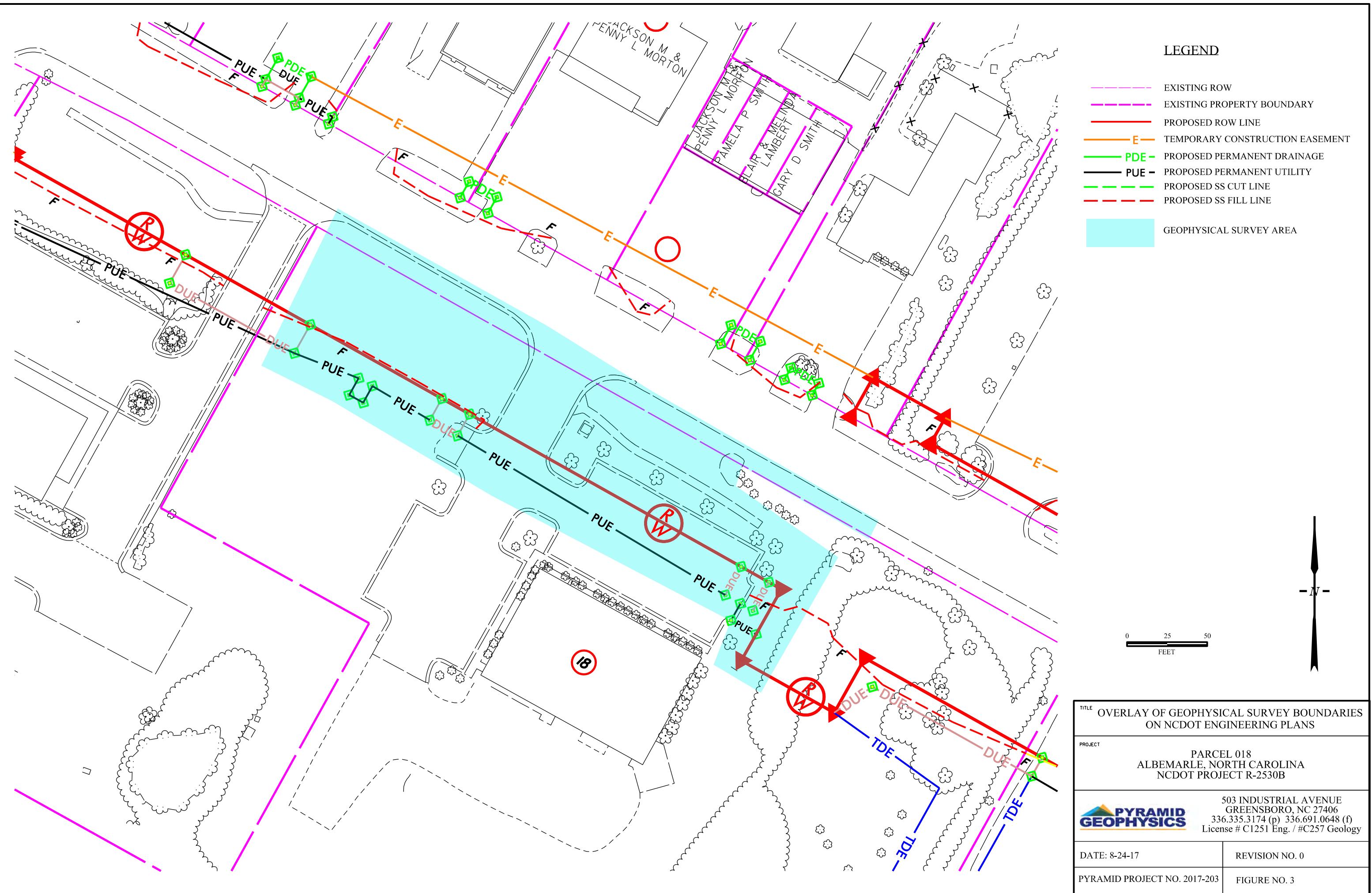
CLIENT

FROEHLING & ROBERTSON

PYRAMID
PROJECT #:

2017-203

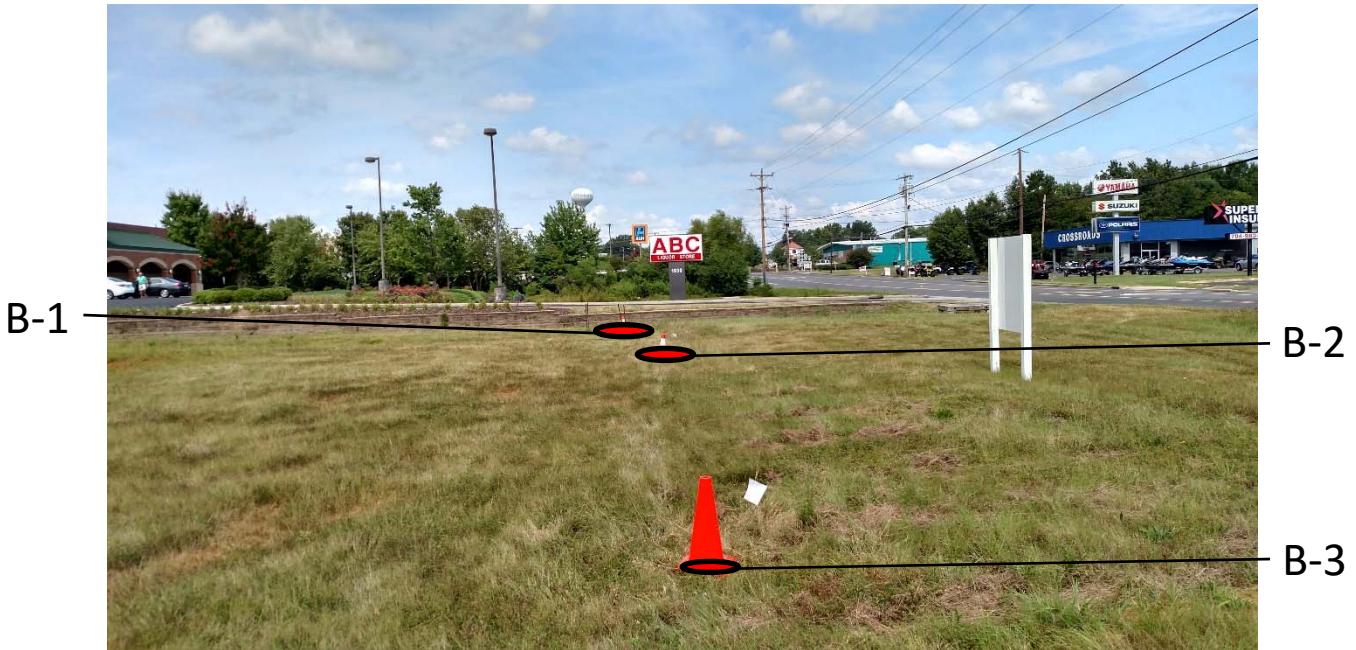
FIGURE 2





APPENDIX III

SITE PHOTOS



B-1

B-2

B-3

Photo #1: Boring locations B-1, B-2, and B-3, facing northwest.



B-3

B-4

Photo #2: Boring locations B-3 and B-4, facing southeast.

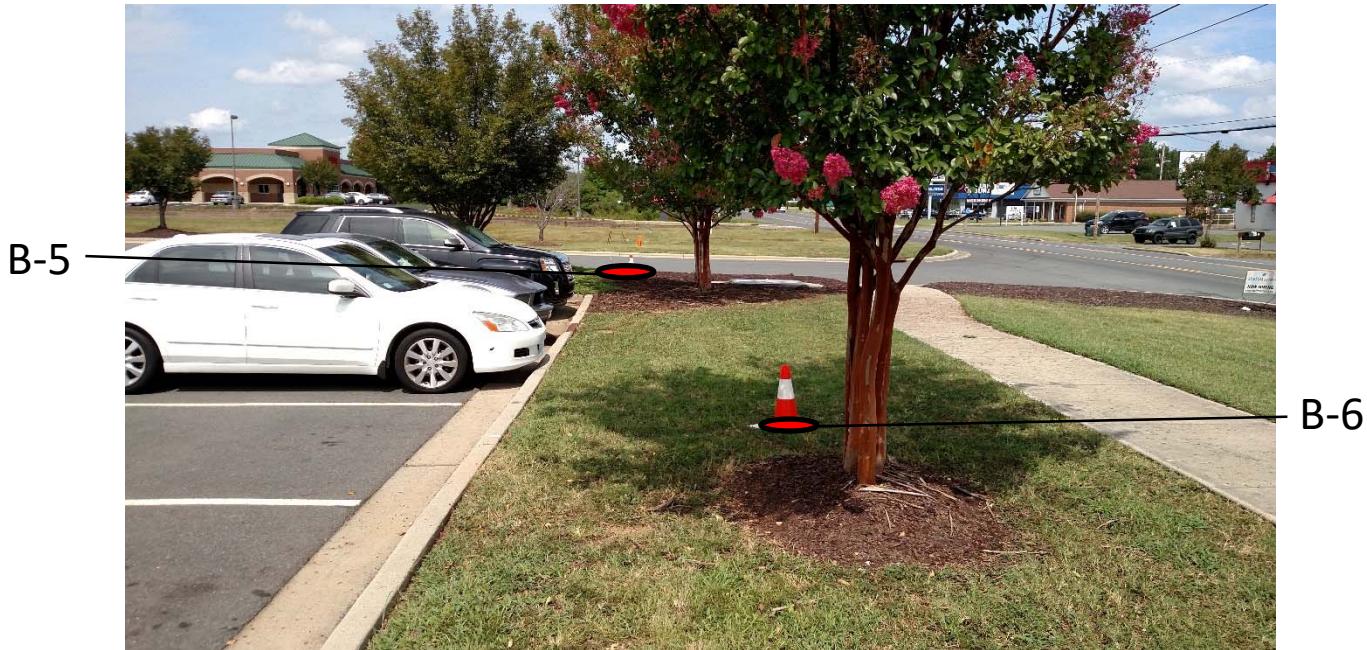


Photo #3: Boring locations B-5 and B-6, facing northwest.

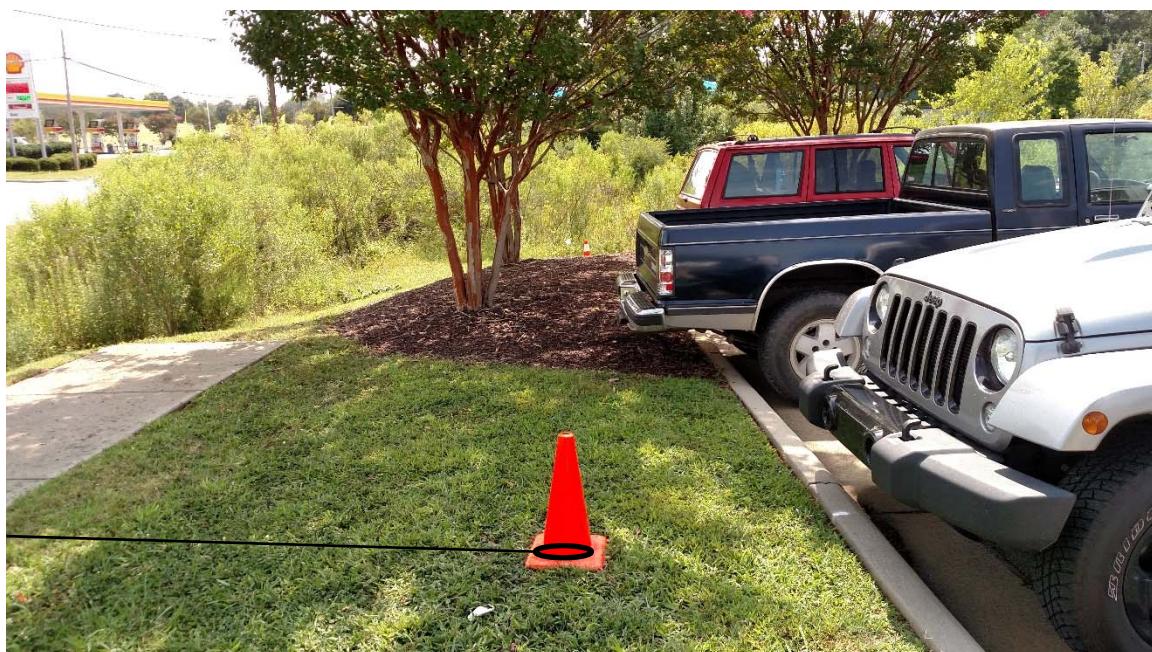


Photo #4: Boring location B-7, facing southeast.



Photo #5: Boring location B-8, facing southeast.



Photo #6: Additional photo of Boring location B-8, facing southeast.



APPENDIX IV

GEOPROBE LOGS



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-1 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 9.0'

Boring Location: SEE BORING LOCATION PLAN Date Drilled: 8/8/17

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Brown, Silty Sandy Clay	2.0	0.2	One sample collected for laboratory analysis (4.0-6.0) No petroleum odors observed.
	4.0	Dry, Tan, Silty Fine to Medium Sands	4.0	0.6	
	6.0		6.0	0.6	
	8.0	Moist, Dry Gray, Silty Clay	8.0	0.8	
	9.0	Geoprobe Boring Terminated by Direct Push Refusal at 9 feet.	9.0	0.6	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-2 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 9.0'

Boring Location: SEE BORING LOCATION PLAN Date Drilled: 8/8/17

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Brown, Silty Sandy Clay	2.0	0.7	One sample collected for laboratory analysis (4.0-6.0) No petroleum odors observed.
	4.0	Moist, Gray Tan, Silty Clay	4.0	0.7	
	6.0		6.0	0.8	
	8.0		8.0	1.0	
	9.0	Geoprobe Boring Terminated by Direct Push Refusal at 9 feet.	9.0	1.0	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-3 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 9.0'

Boring Location: SEE BORING LOCATION PLAN Date Drilled: 8/8/17

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Brown, Silty Sandy Clay	2.0	0.9	One sample collected for laboratory analysis (6.0-8.0) No petroleum odors observed.
	4.0		4.0	0.9	
	6.0	Moist, Tan, Silty Clay	6.0	1.2	
	8.0		8.0	0.9	
	9.0	Geoprobe Boring Terminated by Direct Push Refusal at 9 feet.	9.0	1.2	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-4 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 8.0'

Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Date Drilled: 8/8/17

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Brown, Silty Sandy Clay	2.0	1.0	One sample collected for laboratory analysis (6.0-8.0) No petroleum odors observed.
	4.0	Dry, Tan, Silty Clay	4.0	1.1	
	6.0		6.0	1.1	
	8.0	Geoprobe Boring Terminated by Direct Push Refusal at 8 feet.	8.0	1.1	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-5 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 7.0'

Boring Location: SEE BORING LOCATION PLAN Date Drilled: 8/8/17

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Orange Brown, Silty Sandy Clay	2.0	1.0	One sample collected for laboratory analysis (6.0-7.0) No petroleum odors observed.
	4.0	Dry, Gray, Silty Clay	4.0	0.9	
	6.0	Dry, Gray, Silty Clay with Siltstone	6.0	0.9	
	7.0	Geoprobe Boring Terminated by Direct Push Refusal at 7 feet.	7.0	0.9	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-6 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 8.0'

Boring Location: SEE BORING LOCATION PLAN Date Drilled: 8/8/17

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Orange, Silty Sandy Clay	2.0	0.7	One sample collected for laboratory analysis (6.0-8.0) No petroleum odors observed.
	4.0	Dry, Tan, Silty Clay	4.0	1.0	
	6.0		6.0	0.9	
	8.0	Geoprobe Boring Terminated by Direct Push Refusal at 8 feet.	8.0	0.6	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-7 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 9.0'

Boring Location: SEE BORING LOCATION PLAN Date Drilled: 8/8/17

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
	2.0	Moist, Brown, Silty Sandy Clay	2.0	0.8	One sample collected for laboratory analysis (6.0-8.0) No petroleum odors observed.
	4.0		4.0	0.5	
	6.0	Moist, Gray, Silty Clay	6.0	0.7	
	8.0		8.0	0.8	
	9.0	Geoprobe Boring Terminated by Direct Push Refusal at 9 feet.	9.0	0.6	



FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P018 B-8 (1 of 1)

Project No: 66V-0092

Client: NCDOT

Project: R2530B PSAs

City/State: ALBEMARLE, NC

Elevation: EXISTING

Total Depth: 6.0'

Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH

Hammer Type: Automatic

Date Drilled: 8/9/17

Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Moist, Brown, Silty Sandy Clay			One sample collected for laboratory analysis (0.0-2.0) No petroleum odors observed.
2.0		Dry, Tan Gray, Silty Clay	2.0	0.4	
4.0			4.0	0.3	
6.0		Geoprobe Boring Terminated by Direct Push Refusal at 6 feet.	6.0	0.3	



APPENDIX V
LABORATORY ANALYTICAL RESULTS



Hydrocarbon Analysis Results

Client: F & R
Address: 310 HUBERT ST
RALEIGH, NC 27603

Samples taken Tuesday, August 8, 2017
Samples extracted Tuesday, August 8, 2017
Samples analysed Monday, August 14, 2017

Contact: BEN WHITLEY

Operator PANTESCO

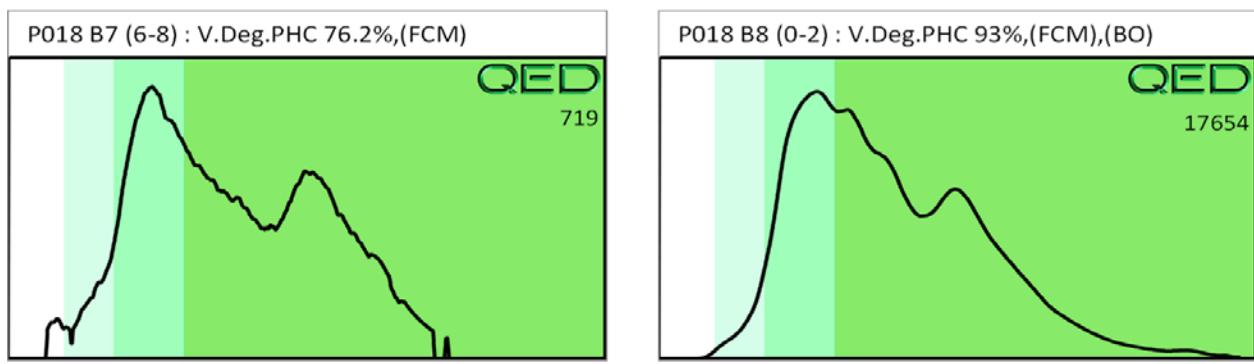
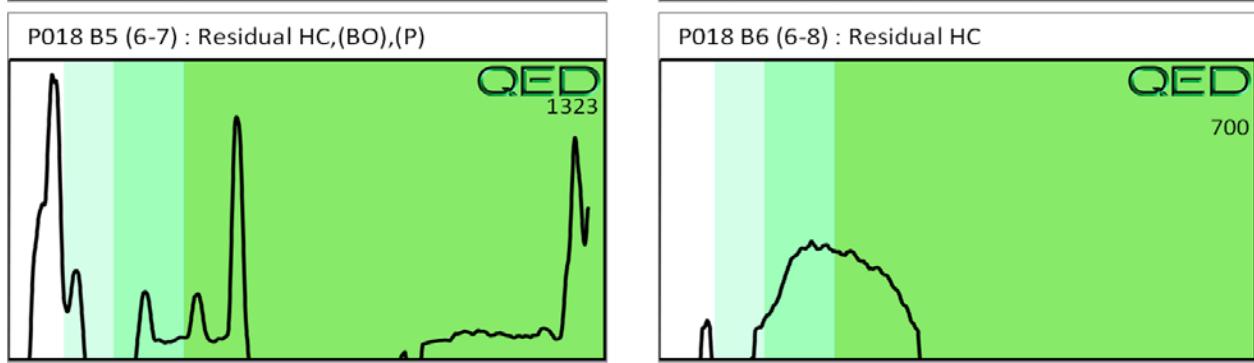
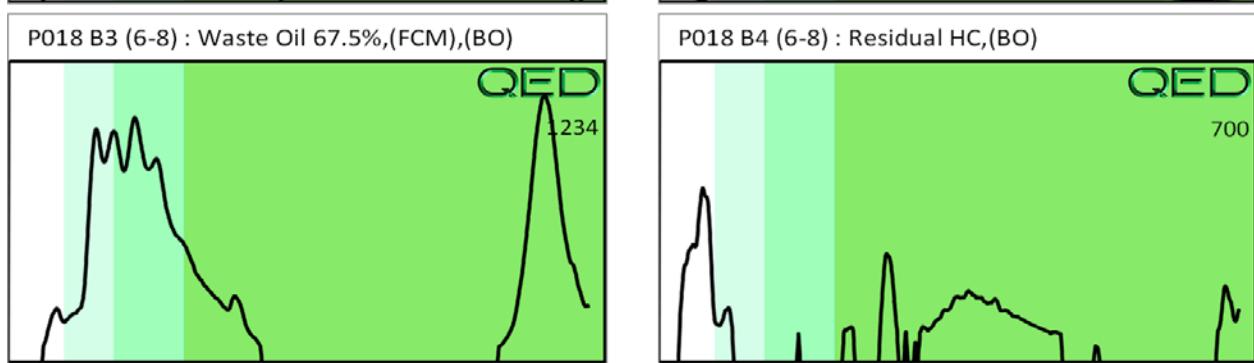
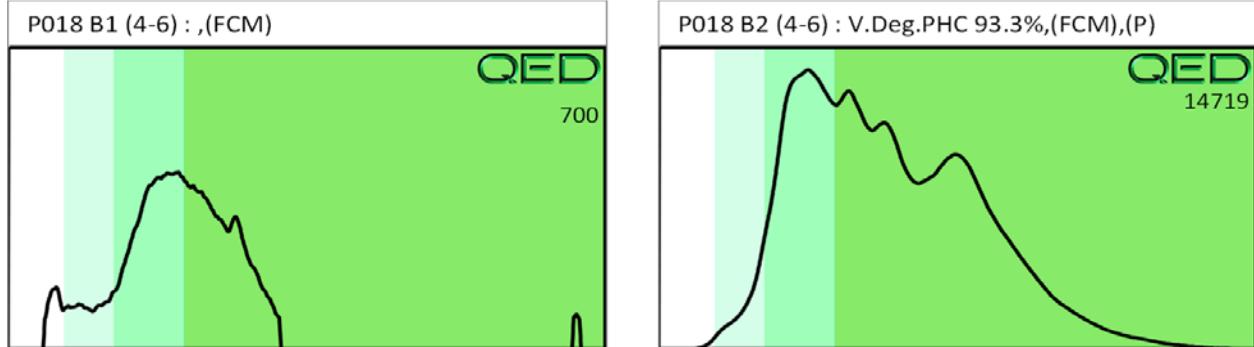
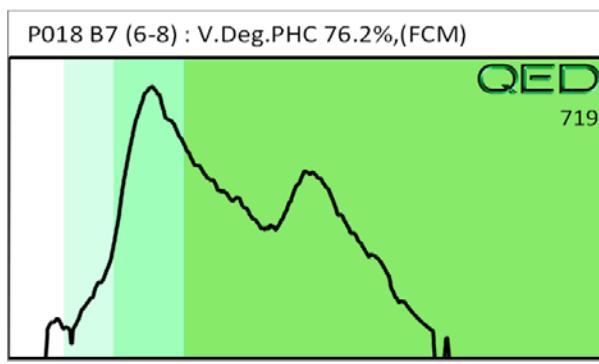
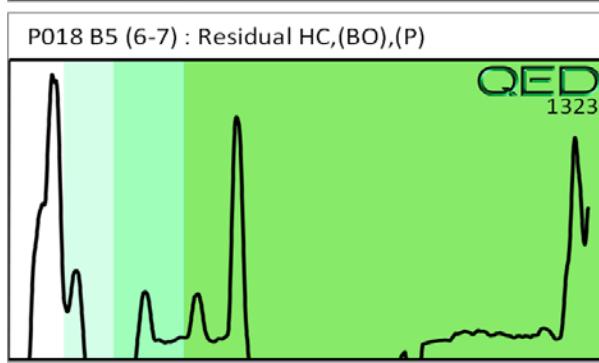
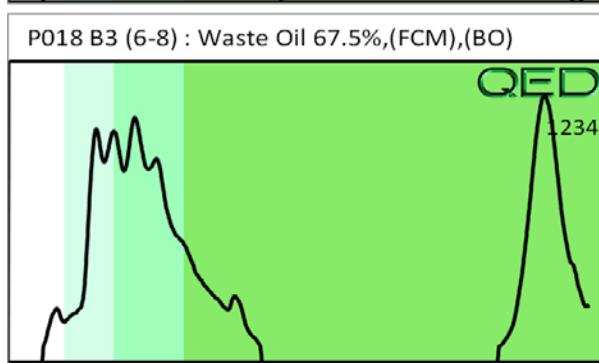
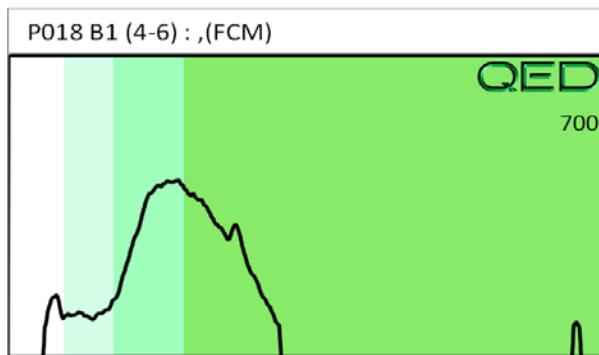
Project: NCDOT - R2530B - P007

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modified Result.

% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon ; PHC = Petroleum HC ; FP = Fingerprint only.





ENCO Laboratories

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102-A Woodwinds Industrial Court

Cary NC, 27511

Phone: 919.467.3090 FAX: 919.467.3515

Monday, August 21, 2017

Froehling and Robertson (FR004)

Attn: Ben Whitley

310 Hubert Street

Raleigh, NC 27603

RE: Laboratory Results for

Project Number: 66V-0092, Project Name/Desc: NCDOT PSAs

ENCO Workorder(s): CA11843

Dear Ben Whitley,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, August 11, 2017.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chuck Smith". The signature is fluid and cursive, with "Chuck" on the first line and "Smith" on the second line.

Chuck Smith

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: P018-B1	Lab ID: CA11843-01	Sampled: 08/08/17 14:20	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 12:55
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 08:43
Client ID: P018-B1	Lab ID: CA11843-01RE1	Sampled: 08/08/17 14:20	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	08/22/17	08/18/17 00:59	08/18/17 14:48
Client ID: P018-B2	Lab ID: CA11843-02	Sampled: 08/08/17 14:40	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 13:24
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 08:53
EPA 8260B	08/22/17	08/17/17 09:54	08/17/17 14:56
Client ID: P018-B3	Lab ID: CA11843-03	Sampled: 08/08/17 14:55	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 13:27
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 08:55
EPA 8260B	08/22/17	08/17/17 09:54	08/17/17 15:27
Client ID: P018-B4	Lab ID: CA11843-04	Sampled: 08/08/17 15:20	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 13:29
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 08:56
EPA 8260B	08/22/17	08/17/17 09:54	08/17/17 15:57
Client ID: P018-B6	Lab ID: CA11843-05	Sampled: 08/08/17 16:05	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 13:31
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 09:03
EPA 8260B	08/22/17	08/17/17 09:54	08/17/17 16:28
Client ID: P018-B7(0-2)	Lab ID: CA11843-06	Sampled: 08/08/17 16:40	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 13:33
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 09:05
EPA 8260B	08/22/17	08/17/17 09:54	08/17/17 16:59
Client ID: P018-B8	Lab ID: CA11843-07	Sampled: 08/09/17 08:30	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/05/18	08/16/17 14:00	08/17/17 13:35
EPA 7471B	09/06/17	08/15/17 13:13	08/16/17 09:07
EPA 8260B	08/23/17	08/14/17 08:20	08/14/17 18:56
Client ID: P015-B1	Lab ID: CA11843-08	Sampled: 08/09/17 10:45	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/05/18	08/16/17 14:00	08/17/17 13:38
EPA 7471B	09/06/17	08/15/17 13:13	08/16/17 09:09
EPA 8260B	08/23/17	08/14/17 08:20	08/14/17 19:27
Client ID: P015-B2	Lab ID: CA11843-09	Sampled: 08/09/17 10:55	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/05/18	08/16/17 14:00	08/17/17 13:40
EPA 7471B	09/06/17	08/15/17 13:13	08/16/17 09:10
EPA 8260B	08/23/17	08/14/17 08:20	08/14/17 19:57

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: P015-B3	Lab ID: CA11843-10	Sampled: 08/09/17 11:10	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/05/18	08/16/17 14:00	08/17/17 13:42
EPA 7471B	09/06/17	08/15/17 13:13	08/16/17 09:12
EPA 8260B	08/23/17	08/14/17 08:20	08/14/17 20:28
Client ID: P015-B4	Lab ID: CA11843-11	Sampled: 08/09/17 11:26	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/05/18	08/16/17 14:00	08/17/17 13:54
EPA 7471B	09/06/17	08/15/17 13:13	08/16/17 09:14
EPA 8260B	08/23/17	08/14/17 08:20	08/14/17 20:59
Client ID: Trip Blank	Lab ID: CA11843-12RE1	Sampled: 08/08/17 14:20	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	08/22/17	08/16/17 00:07	08/16/17 15:55
Client ID: P018-B5	Lab ID: CA11843-13	Sampled: 08/08/17 15:45	Received: 08/11/17 12:00
Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/04/18	08/16/17 14:00	08/17/17 13:57
EPA 7471B	09/05/17	08/15/17 13:13	08/16/17 09:16
EPA 8260B	08/22/17	08/14/17 08:20	08/14/17 21:29

SAMPLE DETECTION SUMMARY

Client ID: P018-B1		Lab ID: CA11843-01						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		7.89		0.366	0.572	mg/kg dry	EPA 6010D	
Barium - Total		64.2		0.114	0.572	mg/kg dry	EPA 6010D	
Cadmium - Total		0.506		0.0110	0.0572	mg/kg dry	EPA 6010D	
Chromium - Total		16.8		0.114	0.572	mg/kg dry	EPA 6010D	
Lead - Total		254		0.137	0.572	mg/kg dry	EPA 6010D	
Mercury - Total		0.0298		0.0160	0.0275	mg/kg dry	EPA 7471B	
Client ID: P018-B2		Lab ID: CA11843-02						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		7.25		0.348	0.543	mg/kg dry	EPA 6010D	
Barium - Total		41.6		0.109	0.543	mg/kg dry	EPA 6010D	
Cadmium - Total		0.178		0.0104	0.0543	mg/kg dry	EPA 6010D	
Carbon disulfide		0.00046	J	0.00042	0.0054	mg/kg dry	EPA 8260B	
Chromium - Total		17.2		0.109	0.543	mg/kg dry	EPA 6010D	
Lead - Total		64.5		0.130	0.543	mg/kg dry	EPA 6010D	
Mercury - Total		0.0214	J	0.0152	0.0261	mg/kg dry	EPA 7471B	
Client ID: P018-B3		Lab ID: CA11843-03						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		9.25		0.368	0.576	mg/kg dry	EPA 6010D	
Barium - Total		37.1		0.115	0.576	mg/kg dry	EPA 6010D	
Cadmium - Total		0.0179	J	0.0111	0.0576	mg/kg dry	EPA 6010D	
Chromium - Total		17.2		0.115	0.576	mg/kg dry	EPA 6010D	
Lead - Total		23.5		0.138	0.576	mg/kg dry	EPA 6010D	
Mercury - Total		0.0269	J	0.0161	0.0276	mg/kg dry	EPA 7471B	
Client ID: P018-B4		Lab ID: CA11843-04						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		9.51		0.355	0.555	mg/kg dry	EPA 6010D	
Barium - Total		46.3		0.111	0.555	mg/kg dry	EPA 6010D	
Cadmium - Total		0.117		0.0107	0.0555	mg/kg dry	EPA 6010D	
Chromium - Total		15.8		0.111	0.555	mg/kg dry	EPA 6010D	
Lead - Total		37.4		0.133	0.555	mg/kg dry	EPA 6010D	
Mercury - Total		0.0357		0.0155	0.0266	mg/kg dry	EPA 7471B	
Client ID: P018-B6		Lab ID: CA11843-05						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		10.9		0.359	0.561	mg/kg dry	EPA 6010D	
Barium - Total		25.0		0.112	0.561	mg/kg dry	EPA 6010D	
Chromium - Total		11.6		0.112	0.561	mg/kg dry	EPA 6010D	
Lead - Total		14.1		0.135	0.561	mg/kg dry	EPA 6010D	
Mercury - Total		0.0291		0.0157	0.0269	mg/kg dry	EPA 7471B	
Client ID: P018-B7(0-2)		Lab ID: CA11843-06						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone		0.0014	J	0.00088	0.0056	mg/kg dry	EPA 8260B	
Arsenic - Total		15.7		0.361	0.565	mg/kg dry	EPA 6010D	
Barium - Total		34.0		0.113	0.565	mg/kg dry	EPA 6010D	
Bromomethane		0.00048	J	0.00036	0.0011	mg/kg dry	EPA 8260B	
Chromium - Total		16.5		0.113	0.565	mg/kg dry	EPA 6010D	
Lead - Total		18.4		0.136	0.565	mg/kg dry	EPA 6010D	
Mercury - Total		0.0310		0.0158	0.0271	mg/kg dry	EPA 7471B	
Client ID: P018-B8		Lab ID: CA11843-07						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		6.25		0.369	0.577	mg/kg dry	EPA 6010D	
Barium - Total		44.8		0.115	0.577	mg/kg dry	EPA 6010D	
Cadmium - Total		0.327		0.0111	0.0577	mg/kg dry	EPA 6010D	
Chromium - Total		22.1		0.115	0.577	mg/kg dry	EPA 6010D	
Lead - Total		61.2		0.139	0.577	mg/kg dry	EPA 6010D	
Mercury - Total		0.0305		0.0162	0.0277	mg/kg dry	EPA 7471B	

SAMPLE DETECTION SUMMARY

Client ID: P015-B1		Lab ID: CA11843-08						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		5.32		0.396	0.618	mg/kg dry	EPA 6010D	
Barium - Total		58.7		0.124	0.618	mg/kg dry	EPA 6010D	
Cadmium - Total		0.0611	J	0.0119	0.0618	mg/kg dry	EPA 6010D	
Chromium - Total		10.6		0.124	0.618	mg/kg dry	EPA 6010D	
Lead - Total		74.3		0.148	0.618	mg/kg dry	EPA 6010D	
Client ID: P015-B2		Lab ID: CA11843-09						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		7.77		0.375	0.586	mg/kg dry	EPA 6010D	
Barium - Total		114		0.117	0.586	mg/kg dry	EPA 6010D	
Cadmium - Total		2.60		0.0113	0.0586	mg/kg dry	EPA 6010D	
Chromium - Total		16.0		0.117	0.586	mg/kg dry	EPA 6010D	
Lead - Total		331		0.141	0.586	mg/kg dry	EPA 6010D	
Mercury - Total		0.0293		0.0164	0.0281	mg/kg dry	EPA 7471B	
Client ID: P015-B3		Lab ID: CA11843-10						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		5.90		0.387	0.605	mg/kg dry	EPA 6010D	
Barium - Total		69.2		0.121	0.605	mg/kg dry	EPA 6010D	
Cadmium - Total		0.638		0.0116	0.0605	mg/kg dry	EPA 6010D	
Chromium - Total		13.5		0.121	0.605	mg/kg dry	EPA 6010D	
Lead - Total		95.2		0.145	0.605	mg/kg dry	EPA 6010D	
Mercury - Total		0.0206	J	0.0149	0.0256	mg/kg dry	EPA 7471B	
Client ID: P015-B4		Lab ID: CA11843-11						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		6.92		0.348	0.543	mg/kg dry	EPA 6010D	
Barium - Total		28.9		0.109	0.543	mg/kg dry	EPA 6010D	
Cadmium - Total		0.297		0.0104	0.0543	mg/kg dry	EPA 6010D	
Chromium - Total		18.7		0.109	0.543	mg/kg dry	EPA 6010D	
Lead - Total		52.1		0.130	0.543	mg/kg dry	EPA 6010D	
Mercury - Total		0.0190	J	0.0152	0.0261	mg/kg dry	EPA 7471B	
Client ID: P018-B5		Lab ID: CA11843-13						
Analyte		Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total		13.5		0.373	0.582	mg/kg dry	EPA 6010D	
Barium - Total		35.2		0.116	0.582	mg/kg dry	EPA 6010D	
Chromium - Total		19.8		0.116	0.582	mg/kg dry	EPA 6010D	
Lead - Total		36.5		0.140	0.582	mg/kg dry	EPA 6010D	
Mercury - Total		0.0279	J	0.0163	0.0280	mg/kg dry	EPA 7471B	

ANALYTICAL RESULTS

Description: P018-B1	Lab Sample ID: CA11843-01	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 14:20	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 87.40

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,1-Dichloroethene [75-35-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00073	U	mg/kg dry	1	0.00073	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00090	U	mg/kg dry	1	0.00090	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2-Dibromoethane [106-93-4]^	0.00053	U	mg/kg dry	1	0.00053	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
2-Butanone [78-93-3]^	0.00089	U	mg/kg dry	1	0.00089	0.0057	7H18040	EPA 8260B	08/18/17 14:48	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0057	7H18040	EPA 8260B	08/18/17 14:48	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
2-Hexanone [591-78-6]^	0.00086	U	mg/kg dry	1	0.00086	0.0057	7H18040	EPA 8260B	08/18/17 14:48	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00065	U	mg/kg dry	1	0.00065	0.0057	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Bromoform [75-25-2]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Carbon disulfide [75-15-0]^	0.00045	U	mg/kg dry	1	0.00045	0.0057	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	

ANALYTICAL RESULTS

Description: P018-B1	Lab Sample ID: CA11843-01	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 14:20	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 87.40

Volatile Organic Compounds by GCMS
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0023	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Methylene Chloride [75-09-2]^	0.00084	U	mg/kg dry	1	0.00084	0.0023	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Xylenes (Total) [1330-20-7]^	0.00064	U	mg/kg dry	1	0.00064	0.0034	7H18040	EPA 8260B	08/18/17 14:48	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	47	1	50.0	93 %	50-127	7H18040	EPA 8260B	08/18/17 14:48	MRK		
Dibromofluoromethane	48	1	50.0	96 %	52-128	7H18040	EPA 8260B	08/18/17 14:48	MRK		
Toluene-d8	53	1	50.0	105 %	57-124	7H18040	EPA 8260B	08/18/17 14:48	MRK		

Metals by EPA 6000/7000 Series Methods
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	7.89		mg/kg dry	1	0.366	0.572	7H16031	EPA 6010D	08/17/17 12:55	JMV	
Barium [7440-39-3]^	64.2		mg/kg dry	1	0.114	0.572	7H16031	EPA 6010D	08/17/17 12:55	JMV	
Cadmium [7440-43-9]^	0.506		mg/kg dry	1	0.0110	0.0572	7H16031	EPA 6010D	08/17/17 12:55	JMV	
Chromium [7440-47-3]^	16.8		mg/kg dry	1	0.114	0.572	7H16031	EPA 6010D	08/17/17 12:55	JMV	
Lead [7439-92-1]^	254		mg/kg dry	1	0.137	0.572	7H16031	EPA 6010D	08/17/17 12:55	JMV	
Mercury [7439-97-6]^	0.0298		mg/kg dry	1	0.0160	0.0275	7H15022	EPA 7471B	08/16/17 08:43	CMK	
Selenium [7782-49-2]^	0.469	U	mg/kg dry	1	0.469	0.572	7H16031	EPA 6010D	08/17/17 12:55	JMV	
Silver [7440-22-4]^	0.114	U	mg/kg dry	1	0.114	0.572	7H16031	EPA 6010D	08/17/17 12:55	JMV	

ANALYTICAL RESULTS

Description: P018-B2	Lab Sample ID: CA11843-02	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 14:40	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 92.08

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00070	U	mg/kg dry	1	0.00070	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00086	U	mg/kg dry	1	0.00086	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2-Dibromoethane [106-93-4]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,2-Dichloropropane [78-87-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,3-Dichloropropane [142-28-9]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
2-Butanone [78-93-3]^	0.00085	U	mg/kg dry	1	0.00085	0.0054	7H17017	EPA 8260B	08/17/17 14:56	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0054	7H17017	EPA 8260B	08/17/17 14:56	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
2-Hexanone [591-78-6]^	0.00081	U	mg/kg dry	1	0.00081	0.0054	7H17017	EPA 8260B	08/17/17 14:56	MRK	
4-Chlorotoluene [106-43-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00062	U	mg/kg dry	1	0.00062	0.0054	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.022	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Bromoform [75-25-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Carbon disulfide [75-15-0]^	0.00046	J	mg/kg dry	1	0.00042	0.0054	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Dibromomethane [74-95-3]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	

ANALYTICAL RESULTS

Description: P018-B2	Lab Sample ID: CA11843-02	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 14:40	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 92.08

Volatile Organic Compounds by GCMS
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0022	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Methylene Chloride [75-09-2]^	0.00079	U	mg/kg dry	1	0.00079	0.0022	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Naphthalene [91-20-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Tetrachloroethene [127-18-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Trichlorofluoromethane [75-69-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Xylenes (Total) [1330-20-7]^	0.00061	U	mg/kg dry	1	0.00061	0.0033	7H17017	EPA 8260B	08/17/17 14:56	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	46	1	50.0	93 %	50-127	7H17017	EPA 8260B	08/17/17 14:56	MRK		
Dibromofluoromethane	46	1	50.0	91 %	52-128	7H17017	EPA 8260B	08/17/17 14:56	MRK		
Toluene-d8	53	1	50.0	105 %	57-124	7H17017	EPA 8260B	08/17/17 14:56	MRK		

Metals by EPA 6000/7000 Series Methods
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	7.25		mg/kg dry	1	0.348	0.543	7H16031	EPA 6010D	08/17/17 13:24	JMV	
Barium [7440-39-3]^	41.6		mg/kg dry	1	0.109	0.543	7H16031	EPA 6010D	08/17/17 13:24	JMV	
Cadmium [7440-43-9]^	0.178		mg/kg dry	1	0.0104	0.0543	7H16031	EPA 6010D	08/17/17 13:24	JMV	
Chromium [7440-47-3]^	17.2		mg/kg dry	1	0.109	0.543	7H16031	EPA 6010D	08/17/17 13:24	JMV	
Lead [7439-92-1]^	64.5		mg/kg dry	1	0.130	0.543	7H16031	EPA 6010D	08/17/17 13:24	JMV	
Mercury [7439-97-6]^	0.0214	J	mg/kg dry	1	0.0152	0.0261	7H15022	EPA 7471B	08/16/17 08:53	CMK	
Selenium [7782-49-2]^	0.445	U	mg/kg dry	1	0.445	0.543	7H16031	EPA 6010D	08/17/17 13:24	JMV	
Silver [7440-22-4]^	0.109	U	mg/kg dry	1	0.109	0.543	7H16031	EPA 6010D	08/17/17 13:24	JMV	

ANALYTICAL RESULTS
Description: P018-B3**Lab Sample ID:** CA11843-03**Received:** 08/11/17 12:00**Matrix:** Soil**Sampled:** 08/08/17 14:55**Work Order:** CA11843**Project:** NCDOT PSAs**Sampled By:** BRIAN OLIM/CLARK SORRELL**% Solids:** 86.87
Volatile Organic Compounds by GCMS

^ - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00074	U	mg/kg dry	1	0.00074	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00091	U	mg/kg dry	1	0.00091	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2-Dibromoethane [106-93-4]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
2-Butanone [78-93-3]^	0.00090	U	mg/kg dry	1	0.00090	0.0058	7H17017	EPA 8260B	08/17/17 15:27	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0058	7H17017	EPA 8260B	08/17/17 15:27	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
2-Hexanone [591-78-6]^	0.00086	U	mg/kg dry	1	0.00086	0.0058	7H17017	EPA 8260B	08/17/17 15:27	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00066	U	mg/kg dry	1	0.00066	0.0058	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Bromoform [75-25-2]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Carbon disulfide [75-15-0]^	0.00045	U	mg/kg dry	1	0.00045	0.0058	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	

ANALYTICAL RESULTS

Description: P018-B3	Lab Sample ID: CA11843-03	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 14:55	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 86.87

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Methylene Chloride [75-09-2]^	0.00084	U	mg/kg dry	1	0.00084	0.0023	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00045	U	mg/kg dry	1	0.00045	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Xylenes (Total) [1330-20-7]^	0.00064	U	mg/kg dry	1	0.00064	0.0035	7H17017	EPA 8260B	08/17/17 15:27	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits		Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	46	1	50.0	93 %	50-127		7H17017	EPA 8260B	08/17/17 15:27	MRK	
Dibromofluoromethane	47	1	50.0	93 %	52-128		7H17017	EPA 8260B	08/17/17 15:27	MRK	
Toluene-d8	53	1	50.0	105 %	57-124		7H17017	EPA 8260B	08/17/17 15:27	MRK	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	9.25		mg/kg dry	1	0.368	0.576	7H16031	EPA 6010D	08/17/17 13:27	JMV	
Barium [7440-39-3]^	37.1		mg/kg dry	1	0.115	0.576	7H16031	EPA 6010D	08/17/17 13:27	JMV	
Cadmium [7440-43-9]^	0.0179	J	mg/kg dry	1	0.0111	0.0576	7H16031	EPA 6010D	08/17/17 13:27	JMV	
Chromium [7440-47-3]^	17.2		mg/kg dry	1	0.115	0.576	7H16031	EPA 6010D	08/17/17 13:27	JMV	
Lead [7439-92-1]^	23.5		mg/kg dry	1	0.138	0.576	7H16031	EPA 6010D	08/17/17 13:27	JMV	
Mercury [7439-97-6]^	0.0269	J	mg/kg dry	1	0.0161	0.0276	7H15022	EPA 7471B	08/16/17 08:55	CMK	
Selenium [7782-49-2]^	0.472	U	mg/kg dry	1	0.472	0.576	7H16031	EPA 6010D	08/17/17 13:27	JMV	
Silver [7440-22-4]^	0.115	U	mg/kg dry	1	0.115	0.576	7H16031	EPA 6010D	08/17/17 13:27	JMV	

ANALYTICAL RESULTS

Description: P018-B4	Lab Sample ID: CA11843-04	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 15:20	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 90.12

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00071	U	mg/kg dry	1	0.00071	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00088	U	mg/kg dry	1	0.00088	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2-Dibromoethane [106-93-4]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,2-Dichloropropane [78-87-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,3-Dichloropropane [142-28-9]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
2-Butanone [78-93-3]^	0.00087	U	mg/kg dry	1	0.00087	0.0055	7H17017	EPA 8260B	08/17/17 15:57	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0055	7H17017	EPA 8260B	08/17/17 15:57	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
2-Hexanone [591-78-6]^	0.00083	U	mg/kg dry	1	0.00083	0.0055	7H17017	EPA 8260B	08/17/17 15:57	MRK	
4-Chlorotoluene [106-43-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00063	U	mg/kg dry	1	0.00063	0.0055	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.022	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Bromoform [75-25-2]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Bromomethane [74-83-9]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Carbon disulfide [75-15-0]^	0.00043	U	mg/kg dry	1	0.00043	0.0055	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Dibromochloromethane [124-48-1]^	0.00039	U	mg/kg dry	1	0.00039	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Dibromomethane [74-95-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	

ANALYTICAL RESULTS

Description: P018-B4	Lab Sample ID: CA11843-04	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 15:20	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRETT	% Solids: 90.12

Volatile Organic Compounds by GCMS

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0022	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Methylene Chloride [75-09-2]^	0.00081	U	mg/kg dry	1	0.00081	0.0022	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Naphthalene [91-20-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Tetrachloroethene [127-18-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00041	U	mg/kg dry	1	0.00041	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00043	U	mg/kg dry	1	0.00043	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Trichloroethene [79-01-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Trichlorofluoromethane [75-69-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Xylenes (Total) [1330-20-7]^	0.00062	U	mg/kg dry	1	0.00062	0.0033	7H17017	EPA 8260B	08/17/17 15:57	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	45	1	50.0	91 %	50-127	7H17017	EPA 8260B	08/17/17 15:57	MRK		
Dibromofluoromethane	47	1	50.0	93 %	52-128	7H17017	EPA 8260B	08/17/17 15:57	MRK		
Toluene-d8	51	1	50.0	103 %	57-124	7H17017	EPA 8260B	08/17/17 15:57	MRK		

Metals by EPA 6000/7000 Series Methods

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	9.51		mg/kg dry	1	0.355	0.555	7H16031	EPA 6010D	08/17/17 13:29	JMV	
Barium [7440-39-3]^	46.3		mg/kg dry	1	0.111	0.555	7H16031	EPA 6010D	08/17/17 13:29	JMV	
Cadmium [7440-43-9]^	0.117		mg/kg dry	1	0.0107	0.0555	7H16031	EPA 6010D	08/17/17 13:29	JMV	
Chromium [7440-47-3]^	15.8		mg/kg dry	1	0.111	0.555	7H16031	EPA 6010D	08/17/17 13:29	JMV	
Lead [7439-92-1]^	37.4		mg/kg dry	1	0.133	0.555	7H16031	EPA 6010D	08/17/17 13:29	JMV	
Mercury [7439-97-6]^	0.0357		mg/kg dry	1	0.0155	0.0266	7H15022	EPA 7471B	08/16/17 08:56	CMK	
Selenium [7782-49-2]^	0.455	U	mg/kg dry	1	0.455	0.555	7H16031	EPA 6010D	08/17/17 13:29	JMV	
Silver [7440-22-4]^	0.111	U	mg/kg dry	1	0.111	0.555	7H16031	EPA 6010D	08/17/17 13:29	JMV	

ANALYTICAL RESULTS

Description: P018-B6	Lab Sample ID: CA11843-05	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 16:05	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 89.20

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00025	U	mg/kg dry	1.41	0.00025	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00039	U	mg/kg dry	1.41	0.00039	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00032	U	mg/kg dry	1.41	0.00032	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00039	U	mg/kg dry	1.41	0.00039	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,1-Dichloroethane [75-34-3]^	0.00039	U	mg/kg dry	1.41	0.00039	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,1-Dichloroethene [75-35-4]^	0.00047	U	mg/kg dry	1.41	0.00047	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,1-Dichloropropene [563-58-6]^	0.00025	U	mg/kg dry	1.41	0.00025	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00044	U	mg/kg dry	1.41	0.00044	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.0010	U	mg/kg dry	1.41	0.0010	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00043	U	mg/kg dry	1.41	0.00043	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00027	U	mg/kg dry	1.41	0.00027	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.0012	U	mg/kg dry	1.41	0.0012	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2-Dibromoethane [106-93-4]^	0.00073	U	mg/kg dry	1.41	0.00073	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00043	U	mg/kg dry	1.41	0.00043	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2-Dichloroethane [107-06-2]^	0.00065	U	mg/kg dry	1.41	0.00065	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,2-Dichloropropane [78-87-5]^	0.00041	U	mg/kg dry	1.41	0.00041	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00032	U	mg/kg dry	1.41	0.00032	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00035	U	mg/kg dry	1.41	0.00035	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,3-Dichloropropane [142-28-9]^	0.00046	U	mg/kg dry	1.41	0.00046	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00032	U	mg/kg dry	1.41	0.00032	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
2,2-Dichloropropane [594-20-7]^	0.00036	U	mg/kg dry	1.41	0.00036	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
2-Butanone [78-93-3]^	0.0012	U	mg/kg dry	1.41	0.0012	0.0079	7H17017	EPA 8260B	08/17/17 16:28	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00025	U	mg/kg dry	1.41	0.00025	0.0079	7H17017	EPA 8260B	08/17/17 16:28	MRK	
2-Chlorotoluene [95-49-8]^	0.00028	U	mg/kg dry	1.41	0.00028	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
2-Hexanone [591-78-6]^	0.0012	U	mg/kg dry	1.41	0.0012	0.0079	7H17017	EPA 8260B	08/17/17 16:28	MRK	
4-Chlorotoluene [106-43-4]^	0.00041	U	mg/kg dry	1.41	0.00041	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
4-Isopropyltoluene [99-87-6]^	0.00025	U	mg/kg dry	1.41	0.00025	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
4-Methyl-2-pantanone [108-10-1]^	0.00090	U	mg/kg dry	1.41	0.00090	0.0079	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Acetone [67-64-1]^	0.022	U	mg/kg dry	1.41	0.022	0.032	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Benzene [71-43-2]^	0.00027	U	mg/kg dry	1.41	0.00027	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Bromobenzene [108-86-1]^	0.00035	U	mg/kg dry	1.41	0.00035	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Bromochloromethane [74-97-5]^	0.00065	U	mg/kg dry	1.41	0.00065	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Bromodichloromethane [75-27-4]^	0.00038	U	mg/kg dry	1.41	0.00038	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Bromoform [75-25-2]^	0.00071	U	mg/kg dry	1.41	0.00071	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Bromomethane [74-83-9]^	0.00051	U	mg/kg dry	1.41	0.00051	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Carbon disulfide [75-15-0]^	0.00062	U	mg/kg dry	1.41	0.00062	0.0079	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Carbon Tetrachloride [56-23-5]^	0.00035	U	mg/kg dry	1.41	0.00035	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Chlorobenzene [108-90-7]^	0.00027	U	mg/kg dry	1.41	0.00027	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Chloroethane [75-00-3]^	0.00039	U	mg/kg dry	1.41	0.00039	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Chloroform [67-66-3]^	0.00028	U	mg/kg dry	1.41	0.00028	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Chloromethane [74-87-3]^	0.00033	U	mg/kg dry	1.41	0.00033	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00036	U	mg/kg dry	1.41	0.00036	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00027	U	mg/kg dry	1.41	0.00027	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Dibromochloromethane [124-48-1]^	0.00055	U	mg/kg dry	1.41	0.00055	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Dibromomethane [74-95-3]^	0.00052	U	mg/kg dry	1.41	0.00052	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00071	U	mg/kg dry	1.41	0.00071	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Ethylbenzene [100-41-4]^	0.00032	U	mg/kg dry	1.41	0.00032	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	

ANALYTICAL RESULTS

Description: P018-B6	Lab Sample ID: CA11843-05	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 16:05	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 89.20

Volatile Organic Compounds by GCMS

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00055	U	mg/kg dry	1.41	0.00055	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Isopropylbenzene [98-82-8]^	0.00024	U	mg/kg dry	1.41	0.00024	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00058	U	mg/kg dry	1.41	0.00058	0.0032	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Methylene Chloride [75-09-2]^	0.0012	U	mg/kg dry	1.41	0.0012	0.0032	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00047	U	mg/kg dry	1.41	0.00047	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Naphthalene [91-20-3]^	0.00043	U	mg/kg dry	1.41	0.00043	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
n-Butyl Benzene [104-51-8]^	0.00021	U	mg/kg dry	1.41	0.00021	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
n-Propyl Benzene [103-65-1]^	0.00028	U	mg/kg dry	1.41	0.00028	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
o-Xylene [95-47-6]^	0.00035	U	mg/kg dry	1.41	0.00035	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
sec-Butylbenzene [135-98-8]^	0.0015	U	mg/kg dry	1.41	0.0015	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Styrene [100-42-5]^	0.0015	U	mg/kg dry	1.41	0.0015	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
tert-Butylbenzene [98-06-6]^	0.00027	U	mg/kg dry	1.41	0.00027	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Tetrachloroethene [127-18-4]^	0.00044	U	mg/kg dry	1.41	0.00044	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Toluene [108-88-3]^	0.00038	U	mg/kg dry	1.41	0.00038	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00058	U	mg/kg dry	1.41	0.00058	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00062	U	mg/kg dry	1.41	0.00062	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Trichloroethene [79-01-6]^	0.00051	U	mg/kg dry	1.41	0.00051	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Trichlorofluoromethane [75-69-4]^	0.00041	U	mg/kg dry	1.41	0.00041	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Vinyl chloride [75-01-4]^	0.00038	U	mg/kg dry	1.41	0.00038	0.0016	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Xylenes (Total) [1330-20-7]^	0.00088	U	mg/kg dry	1.41	0.00088	0.0047	7H17017	EPA 8260B	08/17/17 16:28	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits		Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	49	1.41	50.0	97 %	50-127		7H17017	EPA 8260B	08/17/17 16:28	MRK	
Dibromofluoromethane	48	1.41	50.0	96 %	52-128		7H17017	EPA 8260B	08/17/17 16:28	MRK	
Toluene-d8	52	1.41	50.0	104 %	57-124		7H17017	EPA 8260B	08/17/17 16:28	MRK	

Metals by EPA 6000/7000 Series Methods

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	10.9		mg/kg dry	1	0.359	0.561	7H16031	EPA 6010D	08/17/17 13:31	JMV	
Barium [7440-39-3]^	25.0		mg/kg dry	1	0.112	0.561	7H16031	EPA 6010D	08/17/17 13:31	JMV	
Cadmium [7440-43-9]^	0.0108	U	mg/kg dry	1	0.0108	0.0561	7H16031	EPA 6010D	08/17/17 13:31	JMV	
Chromium [7440-47-3]^	11.6		mg/kg dry	1	0.112	0.561	7H16031	EPA 6010D	08/17/17 13:31	JMV	
Lead [7439-92-1]^	14.1		mg/kg dry	1	0.135	0.561	7H16031	EPA 6010D	08/17/17 13:31	JMV	
Mercury [7439-97-6]^	0.0291		mg/kg dry	1	0.0157	0.0269	7H15022	EPA 7471B	08/16/17 09:03	CMK	
Selenium [7782-49-2]^	0.460	U	mg/kg dry	1	0.460	0.561	7H16031	EPA 6010D	08/17/17 13:31	JMV	
Silver [7440-22-4]^	0.112	U	mg/kg dry	1	0.112	0.561	7H16031	EPA 6010D	08/17/17 13:31	JMV	

ANALYTICAL RESULTS
Description: P018-B7(0-2)

Lab Sample ID: CA11843-06

Received: 08/11/17 12:00

Matrix: Soil

Sampled: 08/08/17 16:40

Work Order: CA11843

Project: NCDOT PSAs

Sampled By: BRIAN OLIM/CLARK SORRELL

% Solids: 88.56

Volatile Organic Compounds by GCMS
[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,1-Dichloroethene [75-35-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00072	U	mg/kg dry	1	0.00072	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00089	U	mg/kg dry	1	0.00089	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2-Dibromoethane [106-93-4]^	0.00052	U	mg/kg dry	1	0.00052	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2-Dichloroethane [107-06-2]^	0.00046	U	mg/kg dry	1	0.00046	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,2-Dichloropropane [78-87-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
2-Butanone [78-93-3]^	0.0014	J	mg/kg dry	1	0.00088	0.0056	7H17017	EPA 8260B	08/17/17 16:59	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0056	7H17017	EPA 8260B	08/17/17 16:59	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
2-Hexanone [591-78-6]^	0.00085	U	mg/kg dry	1	0.00085	0.0056	7H17017	EPA 8260B	08/17/17 16:59	MRK	
4-Chlorotoluene [106-43-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00064	U	mg/kg dry	1	0.00064	0.0056	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Bromochloromethane [74-97-5]^	0.00046	U	mg/kg dry	1	0.00046	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Bromoform [75-25-2]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Bromomethane [74-83-9]^	0.00048	J	mg/kg dry	1	0.00036	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Carbon disulfide [75-15-0]^	0.00044	U	mg/kg dry	1	0.00044	0.0056	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Dibromomethane [74-95-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	

ANALYTICAL RESULTS

Description: P018-B7(0-2)	Lab Sample ID: CA11843-06	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 16:40	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 88.56

Volatile Organic Compounds by GCMS

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0023	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Methylene Chloride [75-09-2]^	0.00082	U	mg/kg dry	1	0.00082	0.0023	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Naphthalene [91-20-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Trichloroethene [79-01-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Trichlorofluoromethane [75-69-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Xylenes (Total) [1330-20-7]^	0.00063	U	mg/kg dry	1	0.00063	0.0034	7H17017	EPA 8260B	08/17/17 16:59	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	49	1	50.0	98 %	50-127	7H17017	EPA 8260B	08/17/17 16:59	MRK		
Dibromofluoromethane	46	1	50.0	93 %	52-128	7H17017	EPA 8260B	08/17/17 16:59	MRK		
Toluene-d8	54	1	50.0	108 %	57-124	7H17017	EPA 8260B	08/17/17 16:59	MRK		

Metals by EPA 6000/7000 Series Methods

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	15.7		mg/kg dry	1	0.361	0.565	7H16031	EPA 6010D	08/17/17 13:33	JMV	
Barium [7440-39-3]^	34.0		mg/kg dry	1	0.113	0.565	7H16031	EPA 6010D	08/17/17 13:33	JMV	
Cadmium [7440-43-9]^	0.0108	U	mg/kg dry	1	0.0108	0.0565	7H16031	EPA 6010D	08/17/17 13:33	JMV	
Chromium [7440-47-3]^	16.5		mg/kg dry	1	0.113	0.565	7H16031	EPA 6010D	08/17/17 13:33	JMV	
Lead [7439-92-1]^	18.4		mg/kg dry	1	0.136	0.565	7H16031	EPA 6010D	08/17/17 13:33	JMV	
Mercury [7439-97-6]^	0.0310		mg/kg dry	1	0.0158	0.0271	7H15022	EPA 7471B	08/16/17 09:05	CMK	
Selenium [7782-49-2]^	0.463	U	mg/kg dry	1	0.463	0.565	7H16031	EPA 6010D	08/17/17 13:33	JMV	
Silver [7440-22-4]^	0.113	U	mg/kg dry	1	0.113	0.565	7H16031	EPA 6010D	08/17/17 13:33	JMV	

ANALYTICAL RESULTS
Description: P018-B8**Lab Sample ID:** CA11843-07**Received:** 08/11/17 12:00**Matrix:** Soil**Sampled:** 08/09/17 08:30**Work Order:** CA11843**Project:** NCDOT PSAs**Sampled By:** BRIAN OLIM/CLARK SORRELL**% Solids:** 86.61
Volatile Organic Compounds by GCMS

^ - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00074	U	mg/kg dry	1	0.00074	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00091	U	mg/kg dry	1	0.00091	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2-Dibromoethane [106-93-4]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
2-Butanone [78-93-3]^	0.00090	U	mg/kg dry	1	0.00090	0.0058	7H14010	EPA 8260B	08/14/17 18:56	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0058	7H14010	EPA 8260B	08/14/17 18:56	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
2-Hexanone [591-78-6]^	0.00087	U	mg/kg dry	1	0.00087	0.0058	7H14010	EPA 8260B	08/14/17 18:56	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00066	U	mg/kg dry	1	0.00066	0.0058	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Bromoform [75-25-2]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Carbon disulfide [75-15-0]^	0.00045	U	mg/kg dry	1	0.00045	0.0058	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	

ANALYTICAL RESULTS

Description: P018-B8	Lab Sample ID: CA11843-07	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 08:30	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 86.61

Volatile Organic Compounds by GCMS
[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Methylene Chloride [75-09-2]^	0.00084	U	mg/kg dry	1	0.00084	0.0023	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00045	U	mg/kg dry	1	0.00045	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Xylenes (Total) [1330-20-7]^	0.00065	U	mg/kg dry	1	0.00065	0.0035	7H14010	EPA 8260B	08/14/17 18:56	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	47	1	50.0	94 %	50-127	7H14010	EPA 8260B	08/14/17 18:56	MRK		
Dibromofluoromethane	47	1	50.0	93 %	52-128	7H14010	EPA 8260B	08/14/17 18:56	MRK		
Toluene-d8	51	1	50.0	101 %	57-124	7H14010	EPA 8260B	08/14/17 18:56	MRK		

Metals by EPA 6000/7000 Series Methods
[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	6.25		mg/kg dry	1	0.369	0.577	7H16031	EPA 6010D	08/17/17 13:35	JMV	
Barium [7440-39-3]^	44.8		mg/kg dry	1	0.115	0.577	7H16031	EPA 6010D	08/17/17 13:35	JMV	
Cadmium [7440-43-9]^	0.327		mg/kg dry	1	0.0111	0.0577	7H16031	EPA 6010D	08/17/17 13:35	JMV	
Chromium [7440-47-3]^	22.1		mg/kg dry	1	0.115	0.577	7H16031	EPA 6010D	08/17/17 13:35	JMV	
Lead [7439-92-1]^	61.2		mg/kg dry	1	0.139	0.577	7H16031	EPA 6010D	08/17/17 13:35	JMV	
Mercury [7439-97-6]^	0.0305		mg/kg dry	1	0.0162	0.0277	7H15022	EPA 7471B	08/16/17 09:07	CMK	
Selenium [7782-49-2]^	0.473	U	mg/kg dry	1	0.473	0.577	7H16031	EPA 6010D	08/17/17 13:35	JMV	
Silver [7440-22-4]^	0.115	U	mg/kg dry	1	0.115	0.577	7H16031	EPA 6010D	08/17/17 13:35	JMV	

ANALYTICAL RESULTS

Description: P015-B1	Lab Sample ID: CA11843-08	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 10:45	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 80.84

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,1-Dichloroethane [75-34-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,1-Dichloroethene [75-35-4]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,1-Dichloropropene [563-58-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00079	U	mg/kg dry	1	0.00079	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00098	U	mg/kg dry	1	0.00098	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2-Dibromoethane [106-93-4]^	0.00057	U	mg/kg dry	1	0.00057	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2-Dichloroethane [107-06-2]^	0.00051	U	mg/kg dry	1	0.00051	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,2-Dichloropropane [78-87-5]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,3-Dichloropropane [142-28-9]^	0.00036	U	mg/kg dry	1	0.00036	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
2,2-Dichloropropane [594-20-7]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
2-Butanone [78-93-3]^	0.00096	U	mg/kg dry	1	0.00096	0.0062	7H14010	EPA 8260B	08/14/17 19:27	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0062	7H14010	EPA 8260B	08/14/17 19:27	MRK	
2-Chlorotoluene [95-49-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
2-Hexanone [591-78-6]^	0.00093	U	mg/kg dry	1	0.00093	0.0062	7H14010	EPA 8260B	08/14/17 19:27	MRK	
4-Chlorotoluene [106-43-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
4-Isopropyltoluene [99-87-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00071	U	mg/kg dry	1	0.00071	0.0062	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Acetone [67-64-1]^	0.017	U	mg/kg dry	1	0.017	0.025	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Benzene [71-43-2]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Bromobenzene [108-86-1]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Bromochloromethane [74-97-5]^	0.00051	U	mg/kg dry	1	0.00051	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Bromodichloromethane [75-27-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Bromoform [75-25-2]^	0.00056	U	mg/kg dry	1	0.00056	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Bromomethane [74-83-9]^	0.00040	U	mg/kg dry	1	0.00040	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Carbon disulfide [75-15-0]^	0.00048	U	mg/kg dry	1	0.00048	0.0062	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Carbon Tetrachloride [56-23-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Chlorobenzene [108-90-7]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Chloroethane [75-00-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Chloroform [67-66-3]^	0.00022	U	mg/kg dry	1	0.00022	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Chloromethane [74-87-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Dibromochloromethane [124-48-1]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Dibromomethane [74-95-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00056	U	mg/kg dry	1	0.00056	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Ethylbenzene [100-41-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	

ANALYTICAL RESULTS

Description: P015-B1	Lab Sample ID: CA11843-08	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 10:45	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 80.84

Volatile Organic Compounds by GCMS
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Isopropylbenzene [98-82-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00046	U	mg/kg dry	1	0.00046	0.0025	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Methylene Chloride [75-09-2]^	0.00090	U	mg/kg dry	1	0.00090	0.0025	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Naphthalene [91-20-3]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
n-Butyl Benzene [104-51-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
n-Propyl Benzene [103-65-1]^	0.00022	U	mg/kg dry	1	0.00022	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
o-Xylene [95-47-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
sec-Butylbenzene [135-98-8]^	0.0012	U	mg/kg dry	1	0.0012	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Styrene [100-42-5]^	0.0012	U	mg/kg dry	1	0.0012	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
tert-Butylbenzene [98-06-6]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Tetrachloroethene [127-18-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Toluene [108-88-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00046	U	mg/kg dry	1	0.00046	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Trichloroethene [79-01-6]^	0.00040	U	mg/kg dry	1	0.00040	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Trichlorofluoromethane [75-69-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Vinyl chloride [75-01-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Xylenes (Total) [1330-20-7]^	0.00069	U	mg/kg dry	1	0.00069	0.0037	7H14010	EPA 8260B	08/14/17 19:27	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	50	1	50.0	99 %	50-127	7H14010	EPA 8260B	08/14/17 19:27	MRK		
Dibromofluoromethane	49	1	50.0	99 %	52-128	7H14010	EPA 8260B	08/14/17 19:27	MRK		
Toluene-d8	53	1	50.0	107 %	57-124	7H14010	EPA 8260B	08/14/17 19:27	MRK		

Metals by EPA 6000/7000 Series Methods
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.32		mg/kg dry	1	0.396	0.618	7H16031	EPA 6010D	08/17/17 13:38	JMV	
Barium [7440-39-3]^	58.7		mg/kg dry	1	0.124	0.618	7H16031	EPA 6010D	08/17/17 13:38	JMV	
Cadmium [7440-43-9]^	0.0611	J	mg/kg dry	1	0.0119	0.0618	7H16031	EPA 6010D	08/17/17 13:38	JMV	
Chromium [7440-47-3]^	10.6		mg/kg dry	1	0.124	0.618	7H16031	EPA 6010D	08/17/17 13:38	JMV	
Lead [7439-92-1]^	74.3		mg/kg dry	1	0.148	0.618	7H16031	EPA 6010D	08/17/17 13:38	JMV	
Mercury [7439-97-6]^	0.0173	U	mg/kg dry	1	0.0173	0.0297	7H15022	EPA 7471B	08/16/17 09:09	CMK	
Selenium [7782-49-2]^	0.507	U	mg/kg dry	1	0.507	0.618	7H16031	EPA 6010D	08/17/17 13:38	JMV	
Silver [7440-22-4]^	0.124	U	mg/kg dry	1	0.124	0.618	7H16031	EPA 6010D	08/17/17 13:38	JMV	

ANALYTICAL RESULTS
Description: P015-B2**Lab Sample ID:** CA11843-09**Received:** 08/11/17 12:00**Matrix:** Soil**Sampled:** 08/09/17 10:55**Work Order:** CA11843**Project:** NCDOT PSAs**Sampled By:** BRIAN OLIM/CLARK SORRELL**% Solids:** 85.27
Volatile Organic Compounds by GCMS

^ - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00075	U	mg/kg dry	1	0.00075	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00093	U	mg/kg dry	1	0.00093	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2-Dibromoethane [106-93-4]^	0.00054	U	mg/kg dry	1	0.00054	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2-Dichloroethane [107-06-2]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
2-Butanone [78-93-3]^	0.00091	U	mg/kg dry	1	0.00091	0.0059	7H14010	EPA 8260B	08/14/17 19:57	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0059	7H14010	EPA 8260B	08/14/17 19:57	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
2-Hexanone [591-78-6]^	0.00088	U	mg/kg dry	1	0.00088	0.0059	7H14010	EPA 8260B	08/14/17 19:57	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00067	U	mg/kg dry	1	0.00067	0.0059	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Bromobenzene [108-86-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Bromochloromethane [74-97-5]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Bromoform [75-25-2]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Bromomethane [74-83-9]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Carbon disulfide [75-15-0]^	0.00046	U	mg/kg dry	1	0.00046	0.0059	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Carbon Tetrachloride [56-23-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Chloromethane [74-87-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Dibromomethane [74-95-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	

ANALYTICAL RESULTS

Description: P015-B2	Lab Sample ID: CA11843-09	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 10:55	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 85.27

Volatile Organic Compounds by GCMS
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Isopropylbenzene [98-82-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Methylene Chloride [75-09-2]^	0.00086	U	mg/kg dry	1	0.00086	0.0023	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Naphthalene [91-20-3]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
o-Xylene [95-47-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Tetrachloroethene [127-18-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00046	U	mg/kg dry	1	0.00046	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Trichloroethene [79-01-6]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Xylenes (Total) [1330-20-7]^	0.00066	U	mg/kg dry	1	0.00066	0.0035	7H14010	EPA 8260B	08/14/17 19:57	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	46	1	50.0	92 %	50-127	7H14010	EPA 8260B	08/14/17 19:57	MRK		
Dibromofluoromethane	47	1	50.0	95 %	52-128	7H14010	EPA 8260B	08/14/17 19:57	MRK		
Toluene-d8	50	1	50.0	100 %	57-124	7H14010	EPA 8260B	08/14/17 19:57	MRK		

Metals by EPA 6000/7000 Series Methods
[^] - ENCLABS Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	7.77		mg/kg dry	1	0.375	0.586	7H16031	EPA 6010D	08/17/17 13:40	JMV	
Barium [7440-39-3]^	114		mg/kg dry	1	0.117	0.586	7H16031	EPA 6010D	08/17/17 13:40	JMV	
Cadmium [7440-43-9]^	2.60		mg/kg dry	1	0.0113	0.0586	7H16031	EPA 6010D	08/17/17 13:40	JMV	
Chromium [7440-47-3]^	16.0		mg/kg dry	1	0.117	0.586	7H16031	EPA 6010D	08/17/17 13:40	JMV	
Lead [7439-92-1]^	331		mg/kg dry	1	0.141	0.586	7H16031	EPA 6010D	08/17/17 13:40	JMV	
Mercury [7439-97-6]^	0.0293		mg/kg dry	1	0.0164	0.0281	7H15022	EPA 7471B	08/16/17 09:10	CMK	
Selenium [7782-49-2]^	0.481	U	mg/kg dry	1	0.481	0.586	7H16031	EPA 6010D	08/17/17 13:40	JMV	
Silver [7440-22-4]^	0.117	U	mg/kg dry	1	0.117	0.586	7H16031	EPA 6010D	08/17/17 13:40	JMV	

ANALYTICAL RESULTS

Description: P015-B3	Lab Sample ID: CA11843-10	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 11:10	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 82.63

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1.1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00030	U	mg/kg dry	1.1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00024	U	mg/kg dry	1.1	0.00024	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00030	U	mg/kg dry	1.1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,1-Dichloroethane [75-34-3]^	0.00030	U	mg/kg dry	1.1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,1-Dichloroethene [75-35-4]^	0.00036	U	mg/kg dry	1.1	0.00036	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1.1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00034	U	mg/kg dry	1.1	0.00034	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00077	U	mg/kg dry	1.1	0.00077	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00033	U	mg/kg dry	1.1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00021	U	mg/kg dry	1.1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00096	U	mg/kg dry	1.1	0.00096	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2-Dibromoethane [106-93-4]^	0.00056	U	mg/kg dry	1.1	0.00056	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00033	U	mg/kg dry	1.1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2-Dichloroethane [107-06-2]^	0.00050	U	mg/kg dry	1.1	0.00050	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,2-Dichloropropane [78-87-5]^	0.00031	U	mg/kg dry	1.1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00024	U	mg/kg dry	1.1	0.00024	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00027	U	mg/kg dry	1.1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,3-Dichloropropane [142-28-9]^	0.00035	U	mg/kg dry	1.1	0.00035	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00024	U	mg/kg dry	1.1	0.00024	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
2,2-Dichloropropane [594-20-7]^	0.00028	U	mg/kg dry	1.1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
2-Butanone [78-93-3]^	0.00094	U	mg/kg dry	1.1	0.00094	0.0061	7H14010	EPA 8260B	08/14/17 20:28	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1.1	0.00019	0.0061	7H14010	EPA 8260B	08/14/17 20:28	MRK	
2-Chlorotoluene [95-49-8]^	0.00022	U	mg/kg dry	1.1	0.00022	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
2-Hexanone [591-78-6]^	0.00091	U	mg/kg dry	1.1	0.00091	0.0061	7H14010	EPA 8260B	08/14/17 20:28	MRK	
4-Chlorotoluene [106-43-4]^	0.00031	U	mg/kg dry	1.1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1.1	0.00019	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00069	U	mg/kg dry	1.1	0.00069	0.0061	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Acetone [67-64-1]^	0.017	U	mg/kg dry	1.1	0.017	0.024	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Benzene [71-43-2]^	0.00021	U	mg/kg dry	1.1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Bromobenzene [108-86-1]^	0.00027	U	mg/kg dry	1.1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Bromochloromethane [74-97-5]^	0.00050	U	mg/kg dry	1.1	0.00050	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Bromodichloromethane [75-27-4]^	0.00029	U	mg/kg dry	1.1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Bromoform [75-25-2]^	0.00054	U	mg/kg dry	1.1	0.00054	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Bromomethane [74-83-9]^	0.00039	U	mg/kg dry	1.1	0.00039	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Carbon disulfide [75-15-0]^	0.00047	U	mg/kg dry	1.1	0.00047	0.0061	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Carbon Tetrachloride [56-23-5]^	0.00027	U	mg/kg dry	1.1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Chlorobenzene [108-90-7]^	0.00021	U	mg/kg dry	1.1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Chloroethane [75-00-3]^	0.00030	U	mg/kg dry	1.1	0.00030	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Chloroform [67-66-3]^	0.00022	U	mg/kg dry	1.1	0.00022	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Chloromethane [74-87-3]^	0.00025	U	mg/kg dry	1.1	0.00025	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00028	U	mg/kg dry	1.1	0.00028	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00021	U	mg/kg dry	1.1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Dibromochloromethane [124-48-1]^	0.00042	U	mg/kg dry	1.1	0.00042	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Dibromomethane [74-95-3]^	0.00040	U	mg/kg dry	1.1	0.00040	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00054	U	mg/kg dry	1.1	0.00054	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Ethylbenzene [100-41-4]^	0.00024	U	mg/kg dry	1.1	0.00024	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	

ANALYTICAL RESULTS

Description: P015-B3	Lab Sample ID: CA11843-10	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 11:10	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 82.63

Volatile Organic Compounds by GCMS

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00042	U	mg/kg dry	1.1	0.00042	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Isopropylbenzene [98-82-8]^	0.00018	U	mg/kg dry	1.1	0.00018	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00045	U	mg/kg dry	1.1	0.00045	0.0024	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Methylene Chloride [75-09-2]^	0.00088	U	mg/kg dry	1.1	0.00088	0.0024	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00036	U	mg/kg dry	1.1	0.00036	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Naphthalene [91-20-3]^	0.00033	U	mg/kg dry	1.1	0.00033	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
n-Butyl Benzene [104-51-8]^	0.00016	U	mg/kg dry	1.1	0.00016	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
n-Propyl Benzene [103-65-1]^	0.00022	U	mg/kg dry	1.1	0.00022	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
o-Xylene [95-47-6]^	0.00027	U	mg/kg dry	1.1	0.00027	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1.1	0.0011	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Styrene [100-42-5]^	0.0012	U	mg/kg dry	1.1	0.0012	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
tert-Butylbenzene [98-06-6]^	0.00021	U	mg/kg dry	1.1	0.00021	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Tetrachloroethene [127-18-4]^	0.00034	U	mg/kg dry	1.1	0.00034	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Toluene [108-88-3]^	0.00029	U	mg/kg dry	1.1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00045	U	mg/kg dry	1.1	0.00045	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00047	U	mg/kg dry	1.1	0.00047	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Trichloroethene [79-01-6]^	0.00039	U	mg/kg dry	1.1	0.00039	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Trichlorofluoromethane [75-69-4]^	0.00031	U	mg/kg dry	1.1	0.00031	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Vinyl chloride [75-01-4]^	0.00029	U	mg/kg dry	1.1	0.00029	0.0012	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Xylenes (Total) [1330-20-7]^	0.00068	U	mg/kg dry	1.1	0.00068	0.0036	7H14010	EPA 8260B	08/14/17 20:28	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	48	1.1	50.0	97 %	50-127	7H14010	EPA 8260B	08/14/17 20:28	MRK		
Dibromofluoromethane	48	1.1	50.0	96 %	52-128	7H14010	EPA 8260B	08/14/17 20:28	MRK		
Toluene-d8	52	1.1	50.0	104 %	57-124	7H14010	EPA 8260B	08/14/17 20:28	MRK		

Metals by EPA 6000/7000 Series Methods

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	5.90		mg/kg dry	1	0.387	0.605	7H16031	EPA 6010D	08/17/17 13:42	JMV	
Barium [7440-39-3]^	69.2		mg/kg dry	1	0.121	0.605	7H16031	EPA 6010D	08/17/17 13:42	JMV	
Cadmium [7440-43-9]^	0.638		mg/kg dry	1	0.0116	0.0605	7H16031	EPA 6010D	08/17/17 13:42	JMV	
Chromium [7440-47-3]^	13.5		mg/kg dry	1	0.121	0.605	7H16031	EPA 6010D	08/17/17 13:42	JMV	
Lead [7439-92-1]^	95.2		mg/kg dry	1	0.145	0.605	7H16031	EPA 6010D	08/17/17 13:42	JMV	
Mercury [7439-97-6]^	0.0206	J	mg/kg dry	0.882	0.0149	0.0256	7H15022	EPA 7471B	08/16/17 09:12	CMK	
Selenium [7782-49-2]^	0.496	U	mg/kg dry	1	0.496	0.605	7H16031	EPA 6010D	08/17/17 13:42	JMV	
Silver [7440-22-4]^	0.121	U	mg/kg dry	1	0.121	0.605	7H16031	EPA 6010D	08/17/17 13:42	JMV	

ANALYTICAL RESULTS

Description: P015-B4	Lab Sample ID: CA11843-11	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 11:26	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 92.07

Volatile Organic Compounds by GCMS

[^] - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00070	U	mg/kg dry	1	0.00070	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00086	U	mg/kg dry	1	0.00086	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2-Dibromoethane [106-93-4]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,2-Dichloropropane [78-87-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,3-Dichloropropane [142-28-9]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
2-Butanone [78-93-3]^	0.00085	U	mg/kg dry	1	0.00085	0.0054	7H14010	EPA 8260B	08/14/17 20:59	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0054	7H14010	EPA 8260B	08/14/17 20:59	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
2-Hexanone [591-78-6]^	0.00081	U	mg/kg dry	1	0.00081	0.0054	7H14010	EPA 8260B	08/14/17 20:59	MRK	
4-Chlorotoluene [106-43-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
4-Methyl-2-pantanone [108-10-1]^	0.00062	U	mg/kg dry	1	0.00062	0.0054	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.022	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Bromoform [75-25-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Carbon disulfide [75-15-0]^	0.00042	U	mg/kg dry	1	0.00042	0.0054	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Dibromomethane [74-95-3]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	

ANALYTICAL RESULTS

Description: P015-B4	Lab Sample ID: CA11843-11	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/09/17 11:26	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 92.07

Volatile Organic Compounds by GCMS

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0022	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Methylene Chloride [75-09-2]^	0.00079	U	mg/kg dry	1	0.00079	0.0022	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Naphthalene [91-20-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Tetrachloroethene [127-18-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Trichlorofluoromethane [75-69-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Xylenes (Total) [1330-20-7]^	0.00061	U	mg/kg dry	1	0.00061	0.0033	7H14010	EPA 8260B	08/14/17 20:59	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	48	1	50.0	97 %	50-127	7H14010	EPA 8260B	08/14/17 20:59	MRK		
Dibromofluoromethane	48	1	50.0	96 %	52-128	7H14010	EPA 8260B	08/14/17 20:59	MRK		
Toluene-d8	52	1	50.0	105 %	57-124	7H14010	EPA 8260B	08/14/17 20:59	MRK		

Metals by EPA 6000/7000 Series Methods

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	6.92		mg/kg dry	1	0.348	0.543	7H16031	EPA 6010D	08/17/17 13:54	JMV	
Barium [7440-39-3]^	28.9		mg/kg dry	1	0.109	0.543	7H16031	EPA 6010D	08/17/17 13:54	JMV	
Cadmium [7440-43-9]^	0.297		mg/kg dry	1	0.0104	0.0543	7H16031	EPA 6010D	08/17/17 13:54	JMV	
Chromium [7440-47-3]^	18.7		mg/kg dry	1	0.109	0.543	7H16031	EPA 6010D	08/17/17 13:54	JMV	
Lead [7439-92-1]^	52.1		mg/kg dry	1	0.130	0.543	7H16031	EPA 6010D	08/17/17 13:54	JMV	
Mercury [7439-97-6]^	0.0190	J	mg/kg dry	1	0.0152	0.0261	7H15022	EPA 7471B	08/16/17 09:14	CMK	
Selenium [7782-49-2]^	0.445	U	mg/kg dry	1	0.445	0.543	7H16031	EPA 6010D	08/17/17 13:54	JMV	
Silver [7440-22-4]^	0.109	U	mg/kg dry	1	0.109	0.543	7H16031	EPA 6010D	08/17/17 13:54	JMV	

ANALYTICAL RESULTS
Description: Trip Blank

Lab Sample ID: CA11843-12

Received: 08/11/17 12:00

Matrix: Water

Sampled: 08/08/17 14:20

Work Order: CA11843

Project: NCDOT PSAs

Sampled By: ENCO

Volatile Organic Compounds by GCMS
[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
4-Methyl-2-pantanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Acetone [67-64-1]^	10	U	ug/L	1	10	20	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	

ANALYTICAL RESULTS

Description: Trip Blank

Lab Sample ID: CA11843-12

Received: 08/11/17 12:00

Matrix: Water

Sampled: 08/08/17 14:20

Work Order: CA11843

Project: NCDOT PSAs

Sampled By: ENCO

Volatile Organic Compounds by GCMS

[^] - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.17	U	ug/L	1	0.17	2.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
o-Xylene [95-47-6]^	0.065	U	ug/L	1	0.065	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	7H16032	EPA 8260B	08/16/17 15:55	MRK	
<i>Surrogates</i>	<i>Results</i>	<i>DF</i>	<i>Spike Lvl</i>	<i>% Rec</i>	<i>% Rec Limits</i>	<i>Batch</i>	<i>Method</i>	<i>Analyzed</i>	<i>By</i>	<i>Notes</i>	
4-Bromofluorobenzene	49	1	50.0	98 %	53-136	7H16032	EPA 8260B	08/16/17 15:55	MRK		
Dibromofluoromethane	51	1	50.0	101 %	67-129	7H16032	EPA 8260B	08/16/17 15:55	MRK		
Toluene-d8	54	1	50.0	107 %	59-134	7H16032	EPA 8260B	08/16/17 15:55	MRK		

ANALYTICAL RESULTS
Description: P018-B5**Lab Sample ID:** CA11843-13**Received:** 08/11/17 12:00**Matrix:** Soil**Sampled:** 08/08/17 15:45**Work Order:** CA11843**Project:** NCDOT PSAs**Sampled By:** BRIAN OLIM/CLARK SORRELL**% Solids:** 85.85
Volatile Organic Compounds by GCMS

^ - ENCLABS certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00025	U	mg/kg dry	1.35	0.00025	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00039	U	mg/kg dry	1.35	0.00039	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00031	U	mg/kg dry	1.35	0.00031	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00039	U	mg/kg dry	1.35	0.00039	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,1-Dichloroethane [75-34-3]^	0.00039	U	mg/kg dry	1.35	0.00039	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,1-Dichloroethene [75-35-4]^	0.00047	U	mg/kg dry	1.35	0.00047	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,1-Dichloropropene [563-58-6]^	0.00025	U	mg/kg dry	1.35	0.00025	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00044	U	mg/kg dry	1.35	0.00044	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.0010	U	mg/kg dry	1.35	0.0010	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00042	U	mg/kg dry	1.35	0.00042	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00027	U	mg/kg dry	1.35	0.00027	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.0012	U	mg/kg dry	1.35	0.0012	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2-Dibromoethane [106-93-4]^	0.00072	U	mg/kg dry	1.35	0.00072	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00042	U	mg/kg dry	1.35	0.00042	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2-Dichloroethane [107-06-2]^	0.00064	U	mg/kg dry	1.35	0.00064	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,2-Dichloropropane [78-87-5]^	0.00041	U	mg/kg dry	1.35	0.00041	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00031	U	mg/kg dry	1.35	0.00031	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00035	U	mg/kg dry	1.35	0.00035	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,3-Dichloropropane [142-28-9]^	0.00046	U	mg/kg dry	1.35	0.00046	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00031	U	mg/kg dry	1.35	0.00031	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
2,2-Dichloropropane [594-20-7]^	0.00036	U	mg/kg dry	1.35	0.00036	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
2-Butanone [78-93-3]^	0.0012	U	mg/kg dry	1.35	0.0012	0.0078	7H14010	EPA 8260B	08/14/17 21:29	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00025	U	mg/kg dry	1.35	0.00025	0.0078	7H14010	EPA 8260B	08/14/17 21:29	MRK	
2-Chlorotoluene [95-49-8]^	0.00028	U	mg/kg dry	1.35	0.00028	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
2-Hexanone [591-78-6]^	0.0012	U	mg/kg dry	1.35	0.0012	0.0078	7H14010	EPA 8260B	08/14/17 21:29	MRK	
4-Chlorotoluene [106-43-4]^	0.00041	U	mg/kg dry	1.35	0.00041	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
4-Isopropyltoluene [99-87-6]^	0.00025	U	mg/kg dry	1.35	0.00025	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
4-Methyl-2-pantanone [108-10-1]^	0.00089	U	mg/kg dry	1.35	0.00089	0.0078	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Acetone [67-64-1]^	0.022	U	mg/kg dry	1.35	0.022	0.031	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Benzene [71-43-2]^	0.00027	U	mg/kg dry	1.35	0.00027	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Bromobenzene [108-86-1]^	0.00035	U	mg/kg dry	1.35	0.00035	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Bromochloromethane [74-97-5]^	0.00064	U	mg/kg dry	1.35	0.00064	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Bromodichloromethane [75-27-4]^	0.00038	U	mg/kg dry	1.35	0.00038	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Bromoform [75-25-2]^	0.00071	U	mg/kg dry	1.35	0.00071	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Bromomethane [74-83-9]^	0.00050	U	mg/kg dry	1.35	0.00050	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Carbon disulfide [75-15-0]^	0.00061	U	mg/kg dry	1.35	0.00061	0.0078	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Carbon Tetrachloride [56-23-5]^	0.00035	U	mg/kg dry	1.35	0.00035	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Chlorobenzene [108-90-7]^	0.00027	U	mg/kg dry	1.35	0.00027	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Chloroethane [75-00-3]^	0.00039	U	mg/kg dry	1.35	0.00039	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Chloroform [67-66-3]^	0.00028	U	mg/kg dry	1.35	0.00028	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Chloromethane [74-87-3]^	0.00033	U	mg/kg dry	1.35	0.00033	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00036	U	mg/kg dry	1.35	0.00036	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00027	U	mg/kg dry	1.35	0.00027	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Dibromochloromethane [124-48-1]^	0.00055	U	mg/kg dry	1.35	0.00055	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Dibromomethane [74-95-3]^	0.00052	U	mg/kg dry	1.35	0.00052	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00071	U	mg/kg dry	1.35	0.00071	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Ethylbenzene [100-41-4]^	0.00031	U	mg/kg dry	1.35	0.00031	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	

ANALYTICAL RESULTS

Description: P018-B5	Lab Sample ID: CA11843-13	Received: 08/11/17 12:00
Matrix: Soil	Sampled: 08/08/17 15:45	Work Order: CA11843
Project: NCDOT PSAs	Sampled By: BRIAN OLIM/CLARK SORRELL	% Solids: 85.85

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00055	U	mg/kg dry	1.35	0.00055	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Isopropylbenzene [98-82-8]^	0.00024	U	mg/kg dry	1.35	0.00024	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00058	U	mg/kg dry	1.35	0.00058	0.0031	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Methylene Chloride [75-09-2]^	0.0011	U	mg/kg dry	1.35	0.0011	0.0031	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00047	U	mg/kg dry	1.35	0.00047	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Naphthalene [91-20-3]^	0.00042	U	mg/kg dry	1.35	0.00042	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
n-Butyl Benzene [104-51-8]^	0.00020	U	mg/kg dry	1.35	0.00020	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
n-Propyl Benzene [103-65-1]^	0.00028	U	mg/kg dry	1.35	0.00028	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
o-Xylene [95-47-6]^	0.00035	U	mg/kg dry	1.35	0.00035	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
sec-Butylbenzene [135-98-8]^	0.0015	U	mg/kg dry	1.35	0.0015	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Styrene [100-42-5]^	0.0015	U	mg/kg dry	1.35	0.0015	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
tert-Butylbenzene [98-06-6]^	0.00027	U	mg/kg dry	1.35	0.00027	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Tetrachloroethene [127-18-4]^	0.00044	U	mg/kg dry	1.35	0.00044	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Toluene [108-88-3]^	0.00038	U	mg/kg dry	1.35	0.00038	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00058	U	mg/kg dry	1.35	0.00058	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00061	U	mg/kg dry	1.35	0.00061	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Trichloroethene [79-01-6]^	0.00050	U	mg/kg dry	1.35	0.00050	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Trichlorofluoromethane [75-69-4]^	0.00041	U	mg/kg dry	1.35	0.00041	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Vinyl chloride [75-01-4]^	0.00038	U	mg/kg dry	1.35	0.00038	0.0016	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Xylenes (Total) [1330-20-7]^	0.00088	U	mg/kg dry	1.35	0.00088	0.0047	7H14010	EPA 8260B	08/14/17 21:29	MRK	
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits	Batch	Method	Analyzed	By	Notes	
4-Bromofluorobenzene	48	1.35	50.0	96 %	50-127	7H14010	EPA 8260B	08/14/17 21:29	MRK		
Dibromofluoromethane	47	1.35	50.0	95 %	52-128	7H14010	EPA 8260B	08/14/17 21:29	MRK		
Toluene-d8	51	1.35	50.0	102 %	57-124	7H14010	EPA 8260B	08/14/17 21:29	MRK		

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	POL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	13.5		mg/kg dry	1	0.373	0.582	7H16031	EPA 6010D	08/17/17 13:57	JMV	
Barium [7440-39-3]^	35.2		mg/kg dry	1	0.116	0.582	7H16031	EPA 6010D	08/17/17 13:57	JMV	
Cadmium [7440-43-9]^	0.0112	U	mg/kg dry	1	0.0112	0.0582	7H16031	EPA 6010D	08/17/17 13:57	JMV	
Chromium [7440-47-3]^	19.8		mg/kg dry	1	0.116	0.582	7H16031	EPA 6010D	08/17/17 13:57	JMV	
Lead [7439-92-1]^	36.5		mg/kg dry	1	0.140	0.582	7H16031	EPA 6010D	08/17/17 13:57	JMV	
Mercury [7439-97-6]^	0.0279	J	mg/kg dry	1	0.0163	0.0280	7H15022	EPA 7471B	08/16/17 09:16	CMK	
Selenium [7782-49-2]^	0.478	U	mg/kg dry	1	0.478	0.582	7H16031	EPA 6010D	08/17/17 13:57	JMV	
Silver [7440-22-4]^	0.116	U	mg/kg dry	1	0.116	0.582	7H16031	EPA 6010D	08/17/17 13:57	JMV	

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H14010 - EPA 5035_MS
Blank (7H14010-BLK1)

Prepared: 08/14/2017 08:20 Analyzed: 08/14/2017 13:17

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropene	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropene	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromoform	0.00041	U	0.0010	mg/kg wet							
Bromochloromethane	0.00024	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00045	U	0.0010	mg/kg wet							
Bromoform	0.00032	U	0.0010	mg/kg wet							
Chlorobenzene	0.00039	U	0.0050	mg/kg wet							
Chloroethane	0.00022	U	0.0010	mg/kg wet							
Chloroform	0.00017	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H14010 - EPA 5035_MS - Continued
Blank (7H14010-BLK1) Continued

Prepared: 08/14/2017 08:20 Analyzed: 08/14/2017 13:17

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
<i>4-Bromofluorobenzene</i>	48			ug/L	50.0		97	50-127			
<i>Dibromofluoromethane</i>	46			ug/L	50.0		92	52-128			
<i>Toluene-d8</i>	52			ug/L	50.0		103	57-124			

LCS (7H14010-BS1)

Prepared: 08/14/2017 08:20 Analyzed: 08/14/2017 11:14

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.019		0.0010	mg/kg wet	0.0200		95	64-133			
Benzene	0.019		0.0010	mg/kg wet	0.0200		94	79-129			
Chlorobenzene	0.020		0.0010	mg/kg wet	0.0200		98	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200		95	77-120			
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200		95	78-118			
<i>4-Bromofluorobenzene</i>	48			ug/L	50.0		96	50-127			
<i>Dibromofluoromethane</i>	46			ug/L	50.0		91	52-128			
<i>Toluene-d8</i>	50			ug/L	50.0		99	57-124			

Matrix Spike (7H14010-MS1)

Prepared: 08/14/2017 08:20 Analyzed: 08/14/2017 11:45

Source: CA12155-09

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00030 U	96	64-133			
Benzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	97	79-129			
Chlorobenzene	0.020		0.0010	mg/kg wet	0.0200	0.00017 U	101	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	97	77-120			
Trichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00032 U	99	78-118			
<i>4-Bromofluorobenzene</i>	50			ug/L	50.0		100	50-127			
<i>Dibromofluoromethane</i>	47			ug/L	50.0		95	52-128			
<i>Toluene-d8</i>	52			ug/L	50.0		103	57-124			

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H14010 - EPA 5035_MS - Continued
Matrix Spike Dup (7H14010-MSD1)

Prepared: 08/14/2017 08:20 Analyzed: 08/14/2017 12:16

Source: CA12155-09

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.018		0.0010	mg/kg wet	0.0200	0.00030 U	90	64-133	7	23	
Benzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	95	79-129	3	23	
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	97	79-121	4	25	
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	94	77-120	3	23	
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00032 U	96	78-118	3	24	
<i>4-Bromofluorobenzene</i>	<i>48</i>			<i>ug/L</i>	<i>50.0</i>		<i>97</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>47</i>			<i>ug/L</i>	<i>50.0</i>		<i>94</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>52</i>			<i>ug/L</i>	<i>50.0</i>		<i>103</i>	<i>57-124</i>			

Batch 7H16032 - EPA 5030B_MS
Blank (7H16032-BLK1)

Prepared: 08/16/2017 00:07 Analyzed: 08/16/2017 15:25

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichlorobenzene	0.012	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.10	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.30	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Chloroethyl Vinyl Ether	1.1	U	5.0	ug/L							
2-Chlorotoluene	0.081	U	1.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Chlorotoluene	0.068	U	1.0	ug/L							
4-Isopropyltoluene	0.085	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	10	U	20	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromobenzene	0.16	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H16032 - EPA 5030B_MS - Continued
Blank (7H16032-BLK1) Continued

Prepared: 08/16/2017 00:07 Analyzed: 08/16/2017 15:25

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Hexachlorobutadiene	0.22	U	1.0	ug/L							
Isopropylbenzene	0.14	U	1.0	ug/L							
m,p-Xylenes	0.17	U	2.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Methyl-tert-Butyl Ether	0.16	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
n-Butyl Benzene	0.058	U	1.0	ug/L							
n-Propyl Benzene	0.12	U	1.0	ug/L							
o-Xylene	0.065	U	1.0	ug/L							
sec-Butylbenzene	0.10	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
tert-Butylbenzene	0.17	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
4-Bromofluorobenzene	50			ug/L	50.0		99	53-136			
Dibromofluoromethane	50			ug/L	50.0		100	67-129			
Toluene-d8	54			ug/L	50.0		108	59-134			

LCS (7H16032-BS1)

Prepared: 08/16/2017 00:07 Analyzed: 08/16/2017 13:24

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	20		1.0	ug/L	20.0		100	75-133			
Benzene	21		1.0	ug/L	20.0		105	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		100	83-117			
Toluene	20		1.0	ug/L	20.0		100	71-118			
Trichloroethene	19		1.0	ug/L	20.0		97	74-119			
4-Bromofluorobenzene	52			ug/L	50.0		104	53-136			
Dibromofluoromethane	52			ug/L	50.0		103	67-129			
Toluene-d8	54			ug/L	50.0		108	59-134			

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H16032 - EPA 5030B_MS - Continued
Matrix Spike (7H16032-MS1)

Prepared: 08/16/2017 00:07 Analyzed: 08/16/2017 13:55

Source: CA12480-03

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.21 U	108	75-133			
Benzene	22		1.0	ug/L	20.0	0.15 U	110	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	105	83-117			
Toluene	21		1.0	ug/L	20.0	0.14 U	106	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.15 U	104	74-119			
<i>4-Bromofluorobenzene</i>	<i>51</i>			<i>ug/L</i>	<i>50.0</i>		<i>102</i>	<i>53-136</i>			
<i>Dibromofluoromethane</i>	<i>53</i>			<i>ug/L</i>	<i>50.0</i>		<i>105</i>	<i>67-129</i>			
<i>Toluene-d8</i>	<i>54</i>			<i>ug/L</i>	<i>50.0</i>		<i>107</i>	<i>59-134</i>			

Matrix Spike Dup (7H16032-MSD1)

Prepared: 08/16/2017 00:07 Analyzed: 08/16/2017 14:25

Source: CA12480-03

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.21 U	95	75-133	13	20	
Benzene	20		1.0	ug/L	20.0	0.15 U	102	81-134	7	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	99	83-117	5	16	
Toluene	20		1.0	ug/L	20.0	0.14 U	98	71-118	8	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	98	74-119	5	22	
<i>4-Bromofluorobenzene</i>	<i>50</i>			<i>ug/L</i>	<i>50.0</i>		<i>101</i>	<i>53-136</i>			
<i>Dibromofluoromethane</i>	<i>50</i>			<i>ug/L</i>	<i>50.0</i>		<i>101</i>	<i>67-129</i>			
<i>Toluene-d8</i>	<i>53</i>			<i>ug/L</i>	<i>50.0</i>		<i>105</i>	<i>59-134</i>			

Batch 7H17017 - EPA 5035_MS
Blank (7H17017-BLK1)

Prepared: 08/17/2017 09:54 Analyzed: 08/17/2017 13:23

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropene	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropene	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropene	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H17017 - EPA 5035_MS - Continued
Blank (7H17017-BLK1) Continued

Prepared: 08/17/2017 09:54 Analyzed: 08/17/2017 13:23

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
4-Bromofluorobenzene	48		ug/L	50.0		95	50-127				
Dibromofluoromethane	46		ug/L	50.0		92	52-128				
Toluene-d8	52		ug/L	50.0		104	57-124				

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H17017 - EPA 5035_MS - Continued

LCS (7H17017-BS1)

Prepared: 08/17/2017 09:54 Analyzed: 08/17/2017 11:51

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.016		0.0010	mg/kg wet	0.0200		81	64-133			
Benzene	0.019		0.0010	mg/kg wet	0.0200		93	79-129			
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200		94	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200		93	77-120			
Trichloroethene	0.018		0.0010	mg/kg wet	0.0200		92	78-118			
<i>4-Bromofluorobenzene</i>	<i>49</i>			<i>ug/L</i>	<i>50.0</i>		<i>98</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>48</i>			<i>ug/L</i>	<i>50.0</i>		<i>96</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>53</i>			<i>ug/L</i>	<i>50.0</i>		<i>105</i>	<i>57-124</i>			

Matrix Spike (7H17017-MS1)

Prepared: 08/17/2017 09:54 Analyzed: 08/17/2017 12:22

Source: CA12480-06

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.017		0.0010	mg/kg wet	0.0200	0.00030 U	86	64-133			
Benzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	95	79-129			
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	97	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	95	77-120			
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00032 U	95	78-118			
<i>4-Bromofluorobenzene</i>	<i>49</i>			<i>ug/L</i>	<i>50.0</i>		<i>98</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>47</i>			<i>ug/L</i>	<i>50.0</i>		<i>94</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>53</i>			<i>ug/L</i>	<i>50.0</i>		<i>106</i>	<i>57-124</i>			

Matrix Spike Dup (7H17017-MSD1)

Prepared: 08/17/2017 09:54 Analyzed: 08/17/2017 12:53

Source: CA12480-06

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.017		0.0010	mg/kg wet	0.0200	0.00030 U	85	64-133	1	23	
Benzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	96	79-129	0.6	23	
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	95	79-121	2	25	
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	94	77-120	2	23	
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00032 U	94	78-118	1	24	
<i>4-Bromofluorobenzene</i>	<i>49</i>			<i>ug/L</i>	<i>50.0</i>		<i>98</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>47</i>			<i>ug/L</i>	<i>50.0</i>		<i>94</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>53</i>			<i>ug/L</i>	<i>50.0</i>		<i>105</i>	<i>57-124</i>			

Batch 7H18040 - EPA 5035_MS
Blank (7H18040-BLK1)

Prepared: 08/18/2017 00:59 Analyzed: 08/18/2017 14:17

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H18040 - EPA 5035_MS - Continued
Blank (7H18040-BLK1) Continued

Prepared: 08/18/2017 00:59 Analyzed: 08/18/2017 14:17

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							

QUALITY CONTROL DATA
Volatile Organic Compounds by GCMS - Quality Control
Batch 7H18040 - EPA 5035_MS - Continued
Blank (7H18040-BLK1) Continued

Prepared: 08/18/2017 00:59 Analyzed: 08/18/2017 14:17

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
<i>4-Bromofluorobenzene</i>	<i>45</i>			<i>ug/L</i>	<i>50.0</i>		<i>91</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>45</i>			<i>ug/L</i>	<i>50.0</i>		<i>91</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>51</i>			<i>ug/L</i>	<i>50.0</i>		<i>102</i>	<i>57-124</i>			

LCS (7H18040-BS1)

Prepared: 08/18/2017 00:59 Analyzed: 08/18/2017 12:14

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.016		0.0010	mg/kg wet	0.0200		81	64-133			
Benzene	0.019		0.0010	mg/kg wet	0.0200		93	79-129			
Chlorobenzene	0.018		0.0010	mg/kg wet	0.0200		92	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200		93	77-120			
Trichloroethene	0.018		0.0010	mg/kg wet	0.0200		88	78-118			
<i>4-Bromofluorobenzene</i>	<i>48</i>			<i>ug/L</i>	<i>50.0</i>		<i>95</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>48</i>			<i>ug/L</i>	<i>50.0</i>		<i>95</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>51</i>			<i>ug/L</i>	<i>50.0</i>		<i>103</i>	<i>57-124</i>			

Matrix Spike (7H18040-MS1)

Prepared: 08/18/2017 00:59 Analyzed: 08/18/2017 12:45

Source: CA12480-10

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.017		0.0010	mg/kg wet	0.0200	0.00030 U	83	64-133			
Benzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	95	79-129			
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	94	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	93	77-120			
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00032 U	93	78-118			
<i>4-Bromofluorobenzene</i>	<i>49</i>			<i>ug/L</i>	<i>50.0</i>		<i>98</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>48</i>			<i>ug/L</i>	<i>50.0</i>		<i>96</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>52</i>			<i>ug/L</i>	<i>50.0</i>		<i>104</i>	<i>57-124</i>			

Matrix Spike Dup (7H18040-MSD1)

Prepared: 08/18/2017 00:59 Analyzed: 08/18/2017 13:16

Source: CA12480-10

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
1,1-Dichloroethene	0.016		0.0010	mg/kg wet	0.0200	0.00030 U	79	64-133	6	23	
Benzene	0.018		0.0010	mg/kg wet	0.0200	0.00017 U	91	79-129	4	23	
Chlorobenzene	0.018		0.0010	mg/kg wet	0.0200	0.00017 U	90	79-121	4	25	
Toluene	0.018		0.0010	mg/kg wet	0.0200	0.00024 U	91	77-120	2	23	
Trichloroethene	0.018		0.0010	mg/kg wet	0.0200	0.00032 U	89	78-118	4	24	
<i>4-Bromofluorobenzene</i>	<i>47</i>			<i>ug/L</i>	<i>50.0</i>		<i>93</i>	<i>50-127</i>			
<i>Dibromofluoromethane</i>	<i>47</i>			<i>ug/L</i>	<i>50.0</i>		<i>94</i>	<i>52-128</i>			
<i>Toluene-d8</i>	<i>50</i>			<i>ug/L</i>	<i>50.0</i>		<i>100</i>	<i>57-124</i>			

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control
Batch 7H15022 - EPA 7471B
Blank (7H15022-BLK1)

Prepared: 08/15/2017 13:13 Analyzed: 08/16/2017 08:38

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Mercury	0.0140	U	0.0240	mg/kg wet							

LCS (7H15022-BS1)

Prepared: 08/15/2017 13:13 Analyzed: 08/16/2017 08:41

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Mercury	0.586		0.0240	mg/kg wet	0.600		98	80-120			

Matrix Spike (7H15022-MS1)

Prepared: 08/15/2017 13:13 Analyzed: 08/16/2017 08:45

Source: CA11843-01

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Mercury	0.688		0.0275	mg/kg dry	0.687	0.0298	96	80-120			

Matrix Spike Dup (7H15022-MSD1)

Prepared: 08/15/2017 13:13 Analyzed: 08/16/2017 08:47

Source: CA11843-01

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Mercury	0.689		0.0275	mg/kg dry	0.687	0.0298	96	80-120	0.2	20	

Post Spike (7H15022-PS1)

Prepared: 08/15/2017 13:13 Analyzed: 08/16/2017 08:49

Source: CA11843-01

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Mercury	7.07		0.200	ug/L	5.00	0.217	137	75-125			QM-08

Batch 7H16031 - EPA 3050B
Blank (7H16031-BLK1)

Prepared: 08/16/2017 14:00 Analyzed: 08/17/2017 12:48

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Arsenic	0.320	U	0.500	mg/kg wet							
Barium	0.100	U	0.500	mg/kg wet							
Cadmium	0.00960	U	0.0500	mg/kg wet							
Chromium	0.100	U	0.500	mg/kg wet							
Lead	0.120	U	0.500	mg/kg wet							
Selenium	0.410	U	0.500	mg/kg wet							
Silver	0.100	U	0.500	mg/kg wet							

LCS (7H16031-BS1)

Prepared: 08/16/2017 14:00 Analyzed: 08/17/2017 12:50

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>POL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Arsenic	9.44		0.500	mg/kg wet	10.0		94	80-120			
Barium	9.43		0.500	mg/kg wet	10.0		94	80-120			
Cadmium	0.903		0.0500	mg/kg wet	1.00		90	80-120			
Chromium	9.60		0.500	mg/kg wet	10.0		96	80-120			
Lead	9.50		0.500	mg/kg wet	10.0		95	80-120			
Selenium	9.37		0.500	mg/kg wet	10.0		94	80-120			
Silver	9.88		0.500	mg/kg wet	10.0		99	80-120			

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7H16031 - EPA 3050B - Continued

Matrix Spike (7H16031-MS1)

Prepared: 08/16/2017 14:00 Analyzed: 08/17/2017 13:01

Source: CA11843-01

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Arsenic	21.3		0.572	mg/kg dry	11.4	7.89	117	75-125			
Barium	88.5		0.572	mg/kg dry	11.4	64.2	212	75-125			QM-07
Cadmium	1.50		0.0572	mg/kg dry	1.14	0.506	86	75-125			
Chromium	34.9		0.572	mg/kg dry	11.4	16.8	158	75-125			QM-07
Lead	98.9		0.572	mg/kg dry	11.4	254	NR	75-125			QM-07
Selenium	5.11		0.572	mg/kg dry	11.4	0.469 U	45	75-125			QM-07
Silver	10.3		0.572	mg/kg dry	11.4	0.114 U	90	75-125			

Matrix Spike Dup (7H16031-MSD1)

Prepared: 08/16/2017 14:00 Analyzed: 08/17/2017 13:03

Source: CA11843-01

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Arsenic	24.5		0.572	mg/kg dry	11.6	7.89	144	75-125	14	20	QM-07
Barium	68.8		0.572	mg/kg dry	11.6	64.2	41	75-125	25	20	QM-07, QM-11
Cadmium	1.43		0.0572	mg/kg dry	1.16	0.506	80	75-125	5	20	
Chromium	44.5		0.572	mg/kg dry	11.6	16.8	240	75-125	24	20	QM-07, QM-11
Lead	138		0.572	mg/kg dry	11.6	254	NR	75-125	33	20	QM-07, QM-11
Selenium	0.469	U	0.572	mg/kg dry	11.6	0.469 U		75-125		20	QM-07
Silver	9.33		0.572	mg/kg dry	11.6	0.114 U	81	75-125	10	20	

Post Spike (7H16031-PS1)

Prepared: 08/16/2017 14:00 Analyzed: 08/17/2017 13:05

Source: CA11843-01

<u>Analyte</u>	<u>Result</u>	<u>Flag</u>	<u>PQL</u>	<u>Units</u>	<u>Spike Level</u>	<u>Source Result</u>	<u>%REC</u>	<u>%REC Limits</u>	<u>RPD</u>	<u>RPD Limit</u>	<u>Notes</u>
Arsenic	0.359		0.0100	mg/L	0.200	0.138	110	80-120			
Barium	1.45		0.0100	mg/L	0.200	1.12	162	80-120			QM-08
Cadmium	0.0298		0.00100	mg/L	0.0200	0.00885	105	80-120			
Chromium	0.526		0.0100	mg/L	0.200	0.293	116	80-120			
Lead	5.05		0.0100	mg/L	0.200	4.43	311	80-120			QM-08
Selenium	0.132		0.0100	mg/L	0.200	-0.0574	66	80-120			QM-08
Silver	0.171		0.0100	mg/L	0.200	-0.00716	85	80-120			

FLAGS/NOTES AND DEFINITIONS

- B** The analyte was detected in the associated method blank.
- D** The sample was analyzed at dilution.
- J** The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
- U** The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
- E** The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
- MRL** Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
- PQL** PQL: Practical Quantitation Limit.
- N** The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".
- P** Greater than 25% concentration difference was observed between the primary and secondary GC column. The lower concentration is reported.
- QM-07** The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- QM-08** Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
- QM-11** Precision between duplicate matrix spikes of the same sample was outside acceptance limits.



ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Dahlke Post Dr.
Orlando, FL 32804
(407) 281-5314 Fax (407) 850-60464810 Executive Park Court, Suite 111
Jacksonville, FL 32211-2089
(904) 384-1887 Fax (904) 298-02101020 Woodlawn Industrial Ct.
Cary, NC 27511
(919) 467-3080 Fax (919) 467-3615

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Page 1 of 1

Client Name: Froehling and Robertson (FPR004)	Project Number: 86V-0082	Requested Analysis: 8260B	Requested Turnaround Times: Standard
Address: 310 Hubert Street	Project Number/Date: NCDOT PSAs	Note: Bulk requests subject to acceptance by the facility	
City/Zip: Raleigh, NC 27603	PO #/Billing Info: 86V00092-0004	Expedited	
Tel: 919-719-1960	Reporting Contact: Ben Whitley	Due / /	
Sampled At Name, Location (City): Mike Sabodish	Billing Contact: Mike Sabodish	Lab Workorder	
Sampled At Signature: [Signature]	Site Location / Time Zone: Albemarle, NC	CA11843	
Preservation: (no check) Continue no necessary			

Item #	Sample ID / Field Identification	Collection Date	Collection Time	Sample / Crust	Main Matrix	Total # of Containers	Sample Comments
P019-B1		8-8-17	1420	4	SO	4	X
P018-B2		1440		4	SO	4	X
P018-B3		1735		4	SO	4	X
P018-B4		1520		4	SO	4	X
P018-B5		1545		4	SO	4	X
P018-B6		1605		4	SO	4	X
P018-B7(0-2)		8-9-17	1640	4	SO	4	X
P018-B8		8-9-17	0830	4	SO	4	X
P015-B1		1045		4	SO	4	X
P015-B2		1055		4	SO	4	X
P015-B3		1110		4	SO	4	X
P015-B4		8-9-17	1120	4	SO	4	X

Sample # & Type of Recovery	Date/Tim	Received By	Date/Tim	Received By	Date/Tim
24	8/3/17	Jeff Green	8/4/17	Rachel	8/11/17
Comments/Specifying Requirements					
Cleaner					

Note: GW-Groundwater SO-Soil DW-Drinking Water SE-Septic SW-Surface Water WA-Wastewater A-Air O-Oil (dissolved in water)
 Preservative: 1-But H-HCl NaHCO₃ S-Sulfuric N-Nitric O-Ozone (dissolved in water)
 Note: All samples submitted to ENCLABS are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreement sent.

Condition Upon Receipt:
X Acceptable



ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

4810 Eastman Park Court, Suite 110
Jacksonville, FL 32216-6069
(800) 295-3007 Fax (904) 336-2310

10-A Woodlands Industrial Cr.
CITY, NC 27911
(919) 467-3000 Fax: (919) 467-32

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Porous cellulose-HCl-NaHCO₃-G-HSICAC-NO-HGCH-C-O-diol (detail in column 1)

Guidelines: NW-Gartane Werner WWW-Vorlesungen A-Air Q-Gitter detail in communication

SINCE

